
Licensing Information User Manual

MySQL HeatWave 26.7.0 Commercial

Table of Contents

Licensing Information	2
Licenses for Third-Party Components	3
Apache Arrow	3
arrow-rs-object-store	32
Avro for cpp	42
bzip2-libs	43
compile time regular expressions	44
cornac	44
cryptography	45
Cython	46
dask	46
delta-kernel-rs	50
distributed	58
drain3	66
eigen	68
FastPFOR C++ Library	70
futures-rs	70
grpc	71
imbalanced-learn	74
joblib	108
LangChain	109
LangChain-Community (Python)	129
lightgbm	148
Llama-3.2-1B-Instruct	180
Llama-3.2-3B-Instruct	182
llama-cpp-python	186
Meta-Llama-3.1-8B	188
Mistral 7B Instruct	189
Mistral 7B Instruct v0.3	190
multilingual-e5-small	190
Natural Language Toolkit (NLTK)	190
Numpy	197
onnxruntime python	204
Oracle OCI Python SDK	215
orbit-ml	222
Pandas	228
Paramiko	240
pdf2image	241
psutil	242
pydantic	243
pyod	245
pytorch	274
rapidhash	292
requests	293
rust-url	294

scikit-learn	296
scikit-surprise	319
scipy	320
sentence-transformers	354
sentence-transformers/all-MiniLM-L12-v2	383
shap	384
sktime	405
SQLAlchemy	420
SQLGlott	422
statsmodels	422
Tesseract	443
TinyXML2	447
tornado	448
transformers	448
xgboost	497
Additional third-party components	515
Standard Licenses	591
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GNU Lesser General Public License v3, June 2007	622
Written Offer for Source Code	635

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- async-trait
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Julian Seward, jseward@bzip.org
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*
* Description:
*   Interface for SYCL buffers to behave as a non-dereferenceable pointer
*   Interface for Placeholder accessor to behave as a pointer on both host
*   and device
*
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dragon4

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SFC64

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.

<https://gist.github.com/imneme/f1f7821f07cf76504a97f6537c818083>

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PCG64

PCG Random Number Generation for C.

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The `rk_random` and `rk_seed` functions algorithms and the original design of the Mersenne Twister RNG:

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Original algorithm for the implementation of `rk_interval` function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the `rk_double` implementation by Isaku Wada.

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Julia

The ziggurat methods were derived from Julia.

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Components

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numpy.core.ma

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Name: OpenBLAS

Files: .libs/libopenb*.so

Description: bundled as a dynamically linked library

Availability: <https://github.com/xianyi/OpenBLAS/>

License: 3-clause BSD

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Biasedurn

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From: Agner Fog <agner@agner.org>
Date: Wed, Jul 22, 2020 at 8:54 PM
Subject: Re: Add BiasedUrn to SciPy?
To: Matt Haberland <mhaberland@calpoly.edu>
Cc: Warren Weckesser <warren.weckesser@gmail.com>

Dear Matt The C++ code for these distributions without binding to the R project are available here:

<https://www.agner.org/random/stocc.zip>

You have my permission to use it in SciPy under the new BSD license.

Best regards,

Agner Fog

On 22/07/2020 17.05, Matt Haberland wrote:

Hi Agner, I'm a maintainer of the Python scientific computing library SciPy, and I'm working on improving the capabilities of our statistics subpackage scipy.stats. We'd like to add both Fisher's and Wallenius' noncentral hypergeometric distributions, but these look quite challenging to implement. We found your BiasedUrn package, and we'd love to wrap it, but we can't include GPL-3 licensed code under our BSD-new license. Would you consider re-licensing BiasedUrn under a more permissive license, such as BSD-new or MIT, so we can include it in SciPy?

Thank you for considering it!

Matt

--

Matt Haberland
Assistant Professor
BioResource and Agricultural Engineering
08A-3K, Cal Poly

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unuran-1.8.1/doc/src/ref_example_FuncStr.texi
unuran-1.8.1/doc/src/ref_example_anti.texi
unuran-1.8.1/doc/src/ref_example_anti_str.texi
unuran-1.8.1/doc/src/ref_example_cext.texi
unuran-1.8.1/doc/src/ref_example_cont.texi
unuran-1.8.1/doc/src/ref_example_cont_str.texi
unuran-1.8.1/doc/src/ref_example_dext.texi
unuran-1.8.1/doc/src/ref_example_discr.texi
unuran-1.8.1/doc/src/ref_example_discr_str.texi
unuran-1.8.1/doc/src/ref_example_emp.texi
unuran-1.8.1/doc/src/ref_example_emp_str.texi
unuran-1.8.1/doc/src/ref_example_gsl.texi
unuran-1.8.1/doc/src/ref_example_mixt.texi
unuran-1.8.1/doc/src/ref_example_mixt_inv.texi
unuran-1.8.1/doc/src/ref_example_rngstreams.texi
unuran-1.8.1/doc/src/ref_example_vemp.texi
unuran-1.8.1/doc/src/ref_example_win32_1.texi
unuran-1.8.1/doc/src/ref_example_win32_2.texi
unuran-1.8.1/doc/src/references.dh
unuran-1.8.1/doc/src/stdtdist.dh
unuran-1.8.1/doc/src/texinfo.tex
unuran-1.8.1/doc/src/top.dh
unuran-1.8.1/doc/src/unuran_src.texi
unuran-1.8.1/doc/stamp-1
unuran-1.8.1/doc/stamp-vti
unuran-1.8.1/doc/unuran.html
unuran-1.8.1/doc/unuran.info
unuran-1.8.1/doc/unuran.pdf
unuran-1.8.1/doc/unuran.texi
unuran-1.8.1/doc/unuran.txt
unuran-1.8.1/doc/unuran_win32.html
unuran-1.8.1/doc/unuran_win32.info
unuran-1.8.1/doc/unuran_win32.pdf
unuran-1.8.1/doc/unuran_win32.texi
unuran-1.8.1/doc/unuran_win32_libname.texi
unuran-1.8.1/doc/version.texi
unuran-1.8.1/doc/version_win32.texi
unuran-1.8.1/examples/Makefile.am
unuran-1.8.1/examples/Makefile.in
```

```
unuran-1.8.1/examples/example0.c
unuran-1.8.1/examples/example0_str.c
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unuran-1.8.1/examples/example2.c
unuran-1.8.1/examples/example2_str.c
unuran-1.8.1/examples/example3.c
unuran-1.8.1/examples/example3_str.c
unuran-1.8.1/examples/example_FuncStr.c
unuran-1.8.1/examples/example_anti.c
unuran-1.8.1/examples/example_anti_str.c
unuran-1.8.1/examples/example_cext.c
unuran-1.8.1/examples/example_cont.c
unuran-1.8.1/examples/example_cont_str.c
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unuran-1.8.1/examples/example_discr_str.c
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unuran-1.8.1/experiments/Makefile.am
unuran-1.8.1/experiments/Makefile.in
unuran-1.8.1/experiments/make_timing_table.c
unuran-1.8.1/experiments/timings_chap_10.conf
unuran-1.8.1/experiments/timings_chap_8.conf
unuran-1.8.1/scripts/Makefile.am
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unuran-1.8.1/scripts/remove_comments.pl
unuran-1.8.1/scripts/run_valgrind.sh
unuran-1.8.1/scripts/win32/Makefile.win32
unuran-1.8.1/scripts/win32/build.sh
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unuran-1.8.1/src/README
unuran-1.8.1/src/distr/Makefile.am
unuran-1.8.1/src/distr/Makefile.in
unuran-1.8.1/src/distributions/Makefile.am
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unuran-1.8.1/src/parser/stringparser_doc.dh
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unuran-1.8.1/src/specfunct/Makefile.in
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unuran-1.8.1/src/uniform/Makefile.am
```

```
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unuran-1.8.1/tests/README.conf
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unuran-1.8.1/tests/t_distr_cvemp.conf
unuran-1.8.1/tests/t_distr_cxtrans.c
unuran-1.8.1/tests/t_distr_cxtrans.conf
```

```
unuran-1.8.1/tests/t_distr_discr.c
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unuran-1.8.1/tests/t_dstd.conf
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unuran-1.8.1/tests/t_mvstd.conf
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unuran-1.8.1/tests/t_ninv.c
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unuran-1.8.1/tests/t_norta.c
unuran-1.8.1/tests/t_norta.conf
unuran-1.8.1/tests/t_nrou.c
unuran-1.8.1/tests/t_nrou.conf
unuran-1.8.1/tests/t_pinv
unuran-1.8.1/tests/t_pinv.c
unuran-1.8.1/tests/t_srou.c
unuran-1.8.1/tests/t_srou.conf
unuran-1.8.1/tests/t_ssr.c
unuran-1.8.1/tests/t_ssr.conf
unuran-1.8.1/tests/t_stringparser.c
unuran-1.8.1/tests/t_stringparser.conf
unuran-1.8.1/tests/t_tabl.c
unuran-1.8.1/tests/t_tabl.conf
unuran-1.8.1/tests/t_tdr.c
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unuran-1.8.1/tests/t_tdr_gw.c
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unuran-1.8.1/tests/t_unif.c
unuran-1.8.1/tests/t_unif.conf
unuran-1.8.1/tests/t_unur_error.c
unuran-1.8.1/tests/t_unur_error.conf
unuran-1.8.1/tests/t_unur_tests.c
unuran-1.8.1/tests/t_unur_tests.conf
```

```

unuran-1.8.1/tests/t_urng.c
unuran-1.8.1/tests/t_urng.conf
unuran-1.8.1/tests/t_utdr.c
unuran-1.8.1/tests/t_utdr.conf
unuran-1.8.1/tests/t_util_matrix.c
unuran-1.8.1/tests/t_util_matrix.conf
unuran-1.8.1/tests/t_vempk.c
unuran-1.8.1/tests/t_vempk.conf
unuran-1.8.1/tests/t_vnrou.c
unuran-1.8.1/tests/t_vnrou.conf
unuran-1.8.1/tests/t_x_gen.c
unuran-1.8.1/tests/t_x_gen.conf
unuran-1.8.1/tests/test_StdDistr.c
unuran-1.8.1/tests/test_StdDistr.m
unuran-1.8.1/tests/test_functionparser.c
unuran-1.8.1/tests/test_functionparser.m
unuran-1.8.1/tests/testcounter.c
unuran-1.8.1/tests/testdistributions/Makefile.am
unuran-1.8.1/tests/testdistributions/Makefile.in
unuran-1.8.1/tests/testdistributions/c_sawtooth_contpdf.c
unuran-1.8.1/tests/testdistributions/c_sawtooth_discpdf.c
unuran-1.8.1/tests/testdistributions/c_w_pdf_from_logpdf.c
unuran-1.8.1/tests/testdistributions/c_with_multiple_of_pdf.c
unuran-1.8.1/tests/testdistributions/c_wo_logpdf.c
unuran-1.8.1/tests/testdistributions/testdistributions.h
unuran-1.8.1/tests/testdistributions/vc_cauchy_RoU_ball.c
unuran-1.8.1/tests/testdistributions/vc_special_correlations_ar1.c
unuran-1.8.1/tests/testdistributions/vc_special_correlations_constantrho.c
unuran-1.8.1/tests/testdistributions/vc_w_marginals.c
unuran-1.8.1/tests/testdistributions/vc_wo_logpdf.c
unuran-1.8.1/tests/testroutines.c
unuran-1.8.1/tests/testunuran.h
unuran-1.8.1/src/distr/deprecated_distr.c
unuran-1.8.1/src/distr/deprecated_distr.h
unuran-1.8.1/src/methods/deprecated_methods.c
unuran-1.8.1/src/methods/deprecated_methods.h
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unuran-1.8.1/src/methods/deprecated_vmt.c
unuran-1.8.1/src/methods/deprecated_vmt.h
unuran-1.8.1/src/methods/deprecated_vmt_struct.h
unuran-1.8.1/src/parser/stringparser_lists.ch.in
UNU.RAN relies on a modified version of the library Cephes,
see ./src/src/specfunct/cephes_source.h

```

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scipy-mathjax

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LangChain

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charset-normalizer

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annotated-types

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pydantic-core

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dragon4

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Name: PCG64

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PCG Random Number Generation for C.

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Name: MT19937

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The `rk_random` and `rk_seed` functions algorithms and the original design of the Mersenne Twister RNG:

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Original algorithm for the implementation of `rk_interval` function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the `rk_double` implementation by Isaku Wada.

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Name: Julia

The ziggurat methods were derived from Julia.

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python-certifi

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ca-bundle.crt -- Bundle of CA Root Certificates

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(CA). These were automatically extracted from Mozilla's root certificates
file (certdata.txt). This file can be found in the mozilla source tree:
https://hg.mozilla.org/mozilla-central/file/tip/security/nss/lib/ckfw/builtins/certdata.txt
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Just configure this file as the SSLCertificateFile.#

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src/greenlet/slp_platformselect.h

files in src/greenlet/platform/ directory

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Original algorithm for the implementation of rk_interval function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the rk_double implementation by Isaku Wada.

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PCG64

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PCG Random Number Generation for C.

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.

<https://gist.github.com/imneme/f1f7821f07cf76504a97f6537c818083>

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SPLITMIX64

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This binary distribution of NumPy also bundles the following software:

Name: OpenBLAS

Files: numpy.libs/libscipy_openblas*.so

Description: bundled as a dynamically linked library

Availability: <https://github.com/OpenMathLib/OpenBLAS/>

License: BSD-3-Clause

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Name: LAPACK

Files: numpy.libs/libscipy_openblas*.so

Description: bundled in OpenBLAS

Availability: <https://github.com/OpenMathLib/OpenBLAS/>

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Name: libquadmath

Files: numpy.libs/libquadmath*.so

Description: dynamically linked to files compiled with gcc

Availability: <https://gcc.gnu.org/git/?p=gcc.git;a=tree;f=libquadmath>

License: LGPL-2.1-or-later

GCC Quad-Precision Math Library

Copyright (C) 2010-2019 Free Software Foundation, Inc.

Written by Francois-Xavier Coudert <fxcoudert@gcc.gnu.org>

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Name: tempita

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Name: dragon4

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Name: SPLITMIX64

Written in 2015 by Sebastiano Vigna (vigna@acm.org)

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Name: SFC64

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.

<https://gist.github.com/imneme/f1f7821f07cf76504a97f6537c818083>

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Name: PHILOX

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Name: PCG64

PCG Random Number Generation for C.

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Name: MT19937

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The rk_random and rk_seed functions algorithms and the original design of the Mersenne Twister RNG:

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Original algorithm for the implementation of rk_interval function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the rk_double implementation by Isaku Wada.

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Name: Julia

The ziggurat methods were derived from Julia.

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complex_test.cpp:// (C) Copyright John Maddock 2005.
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digamma_data.ipp:// (C) Copyright John Maddock 2006-7.
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e_float_concept_check.cpp:// Copyright John Maddock 2011.
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multiprc_concept_check_4.cpp:// Copyright John Maddock 2013.

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ncbeta.ipp:// Copyright John Maddock 2008.
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nct_small_delta.ipp:// Copyright John Maddock 2012.
negative_binomial_quantile.ipp:// (C) Copyright John Maddock 2006-7.
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special_functions_test.cpp:// (C) Copyright Hubert Holin 2003.
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sph_bessel_data.ipp:// Copyright (c) 2007 John Maddock
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test_fisher_f.cpp:// Copyright Paul A. Bristow 2006.
test_fisher_f.cpp:// Copyright John Maddock 2007.
test_fisher_f.cpp: // Distcalc version 1.2 Copyright 2002 H Lohninger, TU Wein
test_gamma.cpp:// (C) Copyright John Maddock 2006.
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test_geometric.cpp:// Copyright Paul A. Bristow 2010.
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test_hankel.cpp:// Copyright John Maddock 2012
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test_hermite.cpp:// Copyright Paul A. Bristow 2007
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test_instances/float_test_instances_8.cpp:// Copyright John Maddock 2011.
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test_instantiate1.cpp:// Copyright John Maddock 2006.
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test_inv_hyp.cpp:// (C) Copyright John Maddock 2006.
test_inverse_chi_squared.cpp:// Copyright Paul A. Bristow 2010.
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test_next.cpp:// (C) Copyright John Maddock 2008.
test_nonfinite_io.cpp:// Copyright 2011 Paul A. Bristow
test_nonfinite_trap.cpp:// Copyright (c) 2006 Johan Rade
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test_normal.cpp:// Copyright Paul A. Bristow 2010.
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test_out_of_range.hpp:// Copyright John Maddock 2012.
test_owens_t.cpp:// Copyright Paul A. Bristow 2012.
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test_sign.cpp:#define BOOST_TEST_MAIN// Copyright John Maddock 2008
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test_signed_zero.cpp:// Copyright 2006 Johan Rade
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Name: libquadmath

Files: scipy.libs/libquadmath*.so

Description: dynamically linked to files compiled with gcc

Availability: <https://gcc.gnu.org/git/?p=gcc.git;a=tree;f=libquadmath>

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Written by Francois-Xavier Coudert <fxcoudert@gcc.gnu.org>

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Name: HiGHS

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Name: Boost

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Name: Biasedurn

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----- Forwarded message -----

From: Agner Fog <agner@agner.org>

Date: Wed, Jul 22, 2020 at 8:54 PM

Subject: Re: Add BiasedUrn to SciPy?

To: Matt Haberland <mhaberland@calpoly.edu>

Cc: Warren Weckesser <warren.weckesser@gmail.com>

Dear Matt The C++ code for these distributions without binding to the R project are available here:

<https://www.agner.org/random/stocc.zip>

You have my permission to use it in SciPy under the new BSD license.

Best regards,

Agner Fog

On 22/07/2020 17.05, Matt Haberland wrote:

Hi Agner, I'm a maintainer of the Python scientific computing library SciPy, and I'm working on improving the capabilities of our statistics subpackage scipy.stats. We'd like to add both Fisher's and Wallenius' noncentral hypergeometric distributions, but these look quite challenging to implement. We found your BiasedUrn package, and we'd love to wrap it, but we can't include GPL-3 licensed code under our BSD-new license. Would you consider re-licensing BiasedUrn under a more permissive license, such as BSD-new or MIT, so we can include it in SciPy?

Thank you for considering it!

Matt

--

Matt Haberland

Assistant Professor

BioResource and Agricultural Engineering

08A-3K, Cal Poly

Name: UNU.RAN

License 3-Clause BSD

Permission was granted on 23 March 2021 by Josef Leydold

(josef.leydold@wu.ac.at) and Wolfgang Hoermann (hormannw@bound.edu.tr)

to use the UNU.RAN code excluding the uniform random number generator

in src/uniform/mrg31k3p.c (copyright by Renee Touzin)

under the BSD licence. The following files have been removed from the original library:

- unuran-1.8.1/COPYING
- unuran-1.8.1/INSTALL
- unuran-1.8.1/Makefile.am
- unuran-1.8.1/Makefile.in
- unuran-1.8.1/NEWS
- unuran-1.8.1/UPGRADE
- unuran-1.8.1/acinclude.m4
- unuran-1.8.1/aclocal.m4
- unuran-1.8.1/autoconf/config.guess
- unuran-1.8.1/autoconf/config.sub
- unuran-1.8.1/autoconf/depcomp
- unuran-1.8.1/autoconf/install-sh
- unuran-1.8.1/autoconf/ltmain.sh
- unuran-1.8.1/autoconf/mdate-sh
- unuran-1.8.1/autoconf/missing
- unuran-1.8.1/autogen.sh
- unuran-1.8.1/configure

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unuran-1.8.1/doc/Makefile.am
unuran-1.8.1/doc/Makefile.in
unuran-1.8.1/doc/figures/Makefile.am
unuran-1.8.1/doc/figures/Makefile.in
unuran-1.8.1/doc/figures/discrete_inversion.eps
unuran-1.8.1/doc/figures/discrete_inversion.pdf
unuran-1.8.1/doc/figures/discrete_inversion.png
unuran-1.8.1/doc/figures/discrete_inversion.txt
unuran-1.8.1/doc/figures/inversion.eps
unuran-1.8.1/doc/figures/inversion.pdf
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unuran-1.8.1/doc/figures/inversion.txt
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unuran-1.8.1/doc/figures/rejection_from_constant_hat.pdf
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unuran-1.8.1/doc/figures/rejection_from_constant_hat.txt
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unuran-1.8.1/doc/figures/rou-cauchy.txt
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unuran-1.8.1/doc/src/Makefile.in
unuran-1.8.1/doc/src/README
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unuran-1.8.1/doc/src/error_debug.dh
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unuran-1.8.1/doc/src/glossary.dh
unuran-1.8.1/doc/src/index.dh
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unuran-1.8.1/doc/src/intro.dh
unuran-1.8.1/doc/src/make_texi.pl
unuran-1.8.1/doc/src/methods.dh
unuran-1.8.1/doc/src/methods_cemp.texi
unuran-1.8.1/doc/src/methods_cont.texi
unuran-1.8.1/doc/src/methods_cvec.texi
unuran-1.8.1/doc/src/methods_cvemp.texi
unuran-1.8.1/doc/src/methods_discr.texi
unuran-1.8.1/doc/src/methods_matr.texi
unuran-1.8.1/doc/src/methods_mcmc.texi
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unuran-1.8.1/doc/src/ref_example0_str.texi
unuran-1.8.1/doc/src/ref_example1.texi
unuran-1.8.1/doc/src/ref_example1_str.texi
unuran-1.8.1/doc/src/ref_example2.texi
unuran-1.8.1/doc/src/ref_example2_str.texi
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unuran-1.8.1/doc/src/ref_example3_str.texi
unuran-1.8.1/doc/src/ref_example_FuncStr.texi
unuran-1.8.1/doc/src/ref_example_anti.texi
unuran-1.8.1/doc/src/ref_example_anti_str.texi
unuran-1.8.1/doc/src/ref_example_cext.texi
unuran-1.8.1/doc/src/ref_example_cont.texi
unuran-1.8.1/doc/src/ref_example_cont_str.texi
unuran-1.8.1/doc/src/ref_example_dext.texi
unuran-1.8.1/doc/src/ref_example_discr.texi
unuran-1.8.1/doc/src/ref_example_discr_str.texi
unuran-1.8.1/doc/src/ref_example_emp.texi
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unuran-1.8.1/doc/src/ref_example_gsl.texi
unuran-1.8.1/doc/src/ref_example_mixt.texi
unuran-1.8.1/doc/src/ref_example_mixt_inv.texi
unuran-1.8.1/doc/src/ref_example_rngstreams.texi
unuran-1.8.1/doc/src/ref_example_vemp.texi
unuran-1.8.1/doc/src/ref_example_win32_1.texi
unuran-1.8.1/doc/src/ref_example_win32_2.texi
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unuran-1.8.1/doc/src/references.dh
unuran-1.8.1/doc/src/stdDIST.dh
unuran-1.8.1/doc/src/texinfo.tex
unuran-1.8.1/doc/src/top.dh
unuran-1.8.1/doc/src/unuran_src.texi
unuran-1.8.1/doc/stamp-1
unuran-1.8.1/doc/stamp-vti
unuran-1.8.1/doc/unuran.html
unuran-1.8.1/doc/unuran.info
unuran-1.8.1/doc/unuran.pdf
unuran-1.8.1/doc/unuran.texi
unuran-1.8.1/doc/unuran.txt
unuran-1.8.1/doc/unuran_win32.html
unuran-1.8.1/doc/unuran_win32.info
unuran-1.8.1/doc/unuran_win32.pdf
unuran-1.8.1/doc/unuran_win32.texi
unuran-1.8.1/doc/unuran_win32_libname.texi
unuran-1.8.1/doc/version.texi
unuran-1.8.1/doc/version_win32.texi
unuran-1.8.1/examples/Makefile.am
unuran-1.8.1/examples/Makefile.in
unuran-1.8.1/examples/example0.c
unuran-1.8.1/examples/example0_str.c
unuran-1.8.1/examples/example1.c
unuran-1.8.1/examples/example1_str.c
unuran-1.8.1/examples/example2.c
unuran-1.8.1/examples/example2_str.c
unuran-1.8.1/examples/example3.c
unuran-1.8.1/examples/example3_str.c
unuran-1.8.1/examples/example_FuncStr.c
unuran-1.8.1/examples/example_anti.c
unuran-1.8.1/examples/example_anti_str.c
unuran-1.8.1/examples/example_cext.c
unuran-1.8.1/examples/example_cont.c
unuran-1.8.1/examples/example_cont_str.c
unuran-1.8.1/examples/example_cpp.cpp
unuran-1.8.1/examples/example_dext.c
unuran-1.8.1/examples/example_discr.c
unuran-1.8.1/examples/example_discr_str.c
unuran-1.8.1/examples/example_emp.c
unuran-1.8.1/examples/example_emp_str.c
unuran-1.8.1/examples/example_errorhandler.c
unuran-1.8.1/examples/example_gsl.c
unuran-1.8.1/examples/example_mcorr.c
unuran-1.8.1/examples/example_mixt.c
unuran-1.8.1/examples/example_mixt_inv.c
unuran-1.8.1/examples/example_prng.c
unuran-1.8.1/examples/example_prng_str.c
unuran-1.8.1/examples/example_rngstreams.c
unuran-1.8.1/examples/example_vemp.c
unuran-1.8.1/experiments/Makefile.am
unuran-1.8.1/experiments/Makefile.in
unuran-1.8.1/experiments/make_timing_table.c
unuran-1.8.1/experiments/timings_chap_10.conf
unuran-1.8.1/experiments/timings_chap_8.conf
unuran-1.8.1/scripts/Makefile.am
unuran-1.8.1/scripts/Makefile.in
unuran-1.8.1/scripts/compute_machine_constants.c
unuran-1.8.1/scripts/make_urng_header.pl
unuran-1.8.1/scripts/merge_h.pl
unuran-1.8.1/scripts/read_PDF.pl
unuran-1.8.1/scripts/remove_comments.pl
unuran-1.8.1/scripts/run_valgrind.sh
unuran-1.8.1/scripts/win32/Makefile.win32
unuran-1.8.1/scripts/win32/build.sh
unuran-1.8.1/scripts/win32/example1.c
unuran-1.8.1/scripts/win32/example2.c
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unuran-1.8.1/scripts/win32/make_dll_def.pl
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unuran-1.8.1/src/README
unuran-1.8.1/src/distr/Makefile.am
unuran-1.8.1/src/distr/Makefile.in
unuran-1.8.1/src/distributions/Makefile.am
unuran-1.8.1/src/distributions/Makefile.in
unuran-1.8.1/src/distributions/README
unuran-1.8.1/src/methods/Makefile.am
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unuran-1.8.1/src/parser/Makefile.in
unuran-1.8.1/src/parser/functparser_doc.dh
unuran-1.8.1/src/parser/make_stringparser.pl
unuran-1.8.1/src/parser/stringparser_doc.dh
unuran-1.8.1/src/specfunct/Makefile.am
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unuran-1.8.1/src/tests/Makefile.am
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unuran-1.8.1/src/uniform/Makefile.am
unuran-1.8.1/src/uniform/Makefile.in
unuran-1.8.1/src/uniform/fish.c
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unuran-1.8.1/src/uniform/mstd.c
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unuran-1.8.1/src/uniform/unuran_urng_prng.h
unuran-1.8.1/src/uniform/unuran_urng_rngstreams.h
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unuran-1.8.1/src/unuran.h.in
unuran-1.8.1/src/urng/Makefile.am
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unuran-1.8.1/tests/Makefile.am
unuran-1.8.1/tests/Makefile.in
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unuran-1.8.1/tests/make_test_files.pl
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unuran-1.8.1/tests/t_vnrou.conf
unuran-1.8.1/tests/t_x_gen.c
unuran-1.8.1/tests/t_x_gen.conf
unuran-1.8.1/tests/test_StdDistr.c
unuran-1.8.1/tests/test_StdDistr.m
unuran-1.8.1/tests/test_functionparser.c
unuran-1.8.1/tests/test_functionparser.m
unuran-1.8.1/tests/testcounter.c
unuran-1.8.1/tests/testdistributions/Makefile.am
unuran-1.8.1/tests/testdistributions/Makefile.in
unuran-1.8.1/tests/testdistributions/c_sawtooth_contpdf.c
unuran-1.8.1/tests/testdistributions/c_sawtooth_discpdf.c
unuran-1.8.1/tests/testdistributions/c_w_pdf_from_logpdf.c
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unuran-1.8.1/tests/testdistributions/c_wo_logpdf.c
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unuran-1.8.1/tests/testdistributions/vc_special_correlations_constantrho.c
unuran-1.8.1/tests/testdistributions/vc_w_marginals.c
unuran-1.8.1/tests/testdistributions/vc_wo_logpdf.c
unuran-1.8.1/tests/testroutines.c
unuran-1.8.1/tests/testunuran.h
unuran-1.8.1/src/distr/deprecated_distr.c
unuran-1.8.1/src/distr/deprecated_distr.h
unuran-1.8.1/src/methods/deprecated_methods.c
unuran-1.8.1/src/methods/deprecated_methods.h
unuran-1.8.1/src/methods/deprecated_tdr_gw.h
unuran-1.8.1/src/methods/deprecated_vmt.c
unuran-1.8.1/src/methods/deprecated_vmt.h
unuran-1.8.1/src/methods/deprecated_vmt_struct.h
unuran-1.8.1/src/parser/stringparser_lists.ch.in
UNU.RAN relies on a modified version of the library Cephes,
see ./src/src/specfunct/cephes_source.h
```

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Name: array-api-compat

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llama-cpp-python

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# Christopher Maloof, Edward Loper, Steven Bird
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Name: SPLITMIX64

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Name: SFC64

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.
<https://gist.github.com/imneme/f1f7821f07cf76504a97f6537c818083>
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The rk_random and rk_seed functions algorithms and the original design of the Mersenne Twister RNG:

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Original algorithm for the implementation of rk_interval function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the rk_double implementation by Isaku Wada.

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Name: Julia

The ziggurat methods were derived from Julia.

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Components

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Bundle

Name: OpenBLAS

Files: .libs/libopenb*.so

Description: bundled as a dynamically linked library

Availability: <https://github.com/xianyi/OpenBLAS/>

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Name: LAPACK

Files: .libs/libopenb*.so

Description: bundled in OpenBLAS

Availability: <https://github.com/xianyi/OpenBLAS/>

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Name: PCG64

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Name: MT19937

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The `rk_random` and `rk_seed` functions algorithms and the original design of the Mersenne Twister RNG:

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Original algorithm for the implementation of `rk_interval`

function from Richard J. Wagner's implementation of the

Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the `rk_double` implementation by Isaku Wada.

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Name: Julia

The ziggurat methods were derived from Julia.

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Components

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Name: nymphy.core.ma

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pyparser -- A C parser in Python

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kiwisolver

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Chris Colbert began the Kiwi project in December 2013 in an effort to
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AUTHOR

David H. Munro wrote Yorick and Gist. Berkeley Yacc (byacc) generated the Yorick parser. The routines in Math are from LAPACK and FFTPACK; MathC contains C translations by David H. Munro. The algorithms for Yorick's random number generator and several special functions in Yorick/include were taken from Numerical Recipes by Press, et. al., although the Yorick implementations are unrelated to those in Numerical Recipes. A small amount of code in Gist was adapted from the X11R4 release, copyright M.I.T. -- the complete copyright notice may be found in the (unused) file Gist/host.c.

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=====

Inda

From inda/Cargo.toml

[package]

:

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:

license = "MIT OR Apache-2.0"

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form_urlencoded

From form_urlencoded/Cargo.toml

[package]

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authors = ["The rust-url developers"]

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percent-encoding

From percent-encoding/Cargo.toml

[package]

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authors = ["The rust-url developers"]

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data-url

From data-url/Cargo.toml

[package]

:

authors = ["Simon Sapin <simon.sapin@exyr.org>"]

:

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=====
Sedre
-----
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:
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scikit-learn

```

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scikit-learn needs "numpy"

"numpy" has bundled license that are included below

scikit-learn needs "scipy"

"scipy" needs "numpy"

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scikit-learn needs "threadpoolctl"

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Files: .spin/cmds.py

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Name: OpenBLAS

Files: numpy/.dylibs/libscipy_openblas*.so

Description: bundled as a dynamically linked library

Availability: <https://github.com/OpenMathLib/OpenBLAS/>

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Description: bundled in OpenBLAS

Availability: <https://github.com/OpenMathLib/OpenBLAS/>

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Written by Francois-Xavier Coudert <fxcoudert@gcc.gnu.org>

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Name: fast_float

Files: scipy/io/_fast_matrix_market/fast_matrix_market/dependencies/fast_float/*

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Name: ryu

Files: scipy/io/_fast_matrix_market/fast_matrix_market/dependencies/ryu/*

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Name: ID

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Name: L-BFGS-B

Files: scipy/optimize/lbfgsb/*

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From the website for the L-BFGS-B code (from at
<http://www.ece.northwestern.edu/~nocedal/lbfgsb.html>):

"""

L-BFGS-B is a limited-memory quasi-Newton code for bound-constrained optimization, i.e. for problems where the only constraints are of the form $l \leq x \leq u$.

"""

This is a Python wrapper (using F2PY) written by David M. Cooke <cookedm@physics.mcmaster.ca> and released as version 0.9 on April 9, 2004. The wrapper was slightly modified by Joonas Paalasmaa for the 3.0 version in March 2012.

License of L-BFGS-B (Fortran code)

=====

The version included here (in lbfgsb.f) is 3.0 (released April 25, 2011). It was written by Ciyu Zhu, Richard Byrd, and Jorge Nocedal <nocedal@ece.nwu.edu>. It carries the following condition for use:

"""

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References

- * R. H. Byrd, P. Lu and J. Nocedal. A Limited Memory Algorithm for Bound Constrained Optimization, (1995), SIAM Journal on Scientific and Statistical Computing, 16, 5, pp. 1190-1208.
- * C. Zhu, R. H. Byrd and J. Nocedal. L-BFGS-B: Algorithm 778: L-BFGS-B, FORTRAN routines for large scale bound constrained optimization (1997), ACM Transactions on Mathematical Software, 23, 4, pp. 550 - 560.
- * J.L. Morales and J. Nocedal. L-BFGS-B: Remark on Algorithm 778: L-BFGS-B, FORTRAN routines for large scale bound constrained optimization (2011), ACM Transactions on Mathematical Software, 38, 1.

"""

The Python wrapper

=====

This code uses F2PY (<http://cens.ioc.ee/projects/f2py2e/>) to generate the wrapper around the Fortran code.

The Python code and wrapper are copyrighted 2004 by David M. Cooke

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Example usage

=====

An example of the usage is given at the bottom of the lbfgsb.py file.

Run it with 'python lbfgsb.py'.

License for the Python wrapper

=====

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Name: LAPJVsp

Files: scipy/sparse/csgraph/_matching.pyx

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Files: scipy/fft/_pocketfft/[pocketfft.h, pypocketfft.cxx]

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Name: uarray

Files: scipy/_lib/uarray/*

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Name: ampgo

Files: benchmarks/benchmarks/go_benchmark_functions/*.py

License: MIT

Functions for testing global optimizers, forked from the AMPGO project,
<https://code.google.com/archive/p/ampgo>

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Name: pybind11

Files: no source files are included, however pybind11 binary artifacts are included with every binary build of SciPy.

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Name: Biasedurn
Files: scipy/stats/biasedurn/*
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Name: NumPy

Files: scipy/stats/_rcont/[logfactorial.h,logfactorial.c]

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Name: array-api-compat

Files: scipy/_lib/array-api-compat/*

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Name: Tempita

Files: scipy/_build_utils/tempita/*

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This distribution of SciPy also bundles the following software:

Name: OpenBLAS

Files: scipy/.dylibs/libopenblas*.so

Description: bundled as a dynamically linked library

Availability: <https://github.com/OpenMathLib/OpenBLAS/>

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Name: LAPACK

Files: scipy/.dylibs/libopenblas*.so

Description: bundled in OpenBLAS

Availability: <https://github.com/OpenMathLib/OpenBLAS/>

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package_name: threadpoolctl

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compile_test/sf_hermite_incl_test.cpp:// Copyright John Maddock 2006.
compile_test/poison.hpp:// Copyright John Maddock 2013.
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compile_test/main.cpp:// Copyright John Maddock 2009.
compile_test/sf_math_fwd_incl_test.cpp:// Copyright John Maddock 2006.
compile_test/sf_airy_incl_test.cpp:// Copyright John Maddock 2012.
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compile_test/dist_cauchy_incl_test.cpp:// Copyright John Maddock 2006.
complex_test.cpp:// (C) Copyright John Maddock 2005.
digamma_data.ipp:// (C) Copyright John Maddock 2006-7.
digamma_neg_data.ipp:// (C) Copyright John Maddock 2006-7.
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digamma_small_data.ipp:// (C) Copyright John Maddock 2006-7.
e_float_concept_check.cpp:// Copyright John Maddock 2011.
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handle_test_result.hpp:// (C) Copyright John Maddock 2006-7.
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hypergeometric_dist_data2.ipp:// Copyright John Maddock 2008
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ibeta_data.ipp:// (C) Copyright John Maddock 2006.
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laguerre2.ipp:// (C) Copyright John Maddock 2006-7.
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multiprc_concept_check_4.cpp:// Copyright John Maddock 2013.
ncbeta.ipp:// Copyright John Maddock 2008.
ncbeta_big.ipp:// Copyright John Maddock 2008.
nccs.ipp:// Copyright John Maddock 2008.

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nccs_big.ipp:// Copyright John Maddock 2008.
nct.ipp:// Copyright John Maddock 2008.
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nct_small_delta.ipp:// Copyright John Maddock 2012.
negative_binomial_quantile.ipp:// (C) Copyright John Maddock 2006-7.
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s_.ipp:// Copyright (c) 2006 Johan Rade
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special_functions_test.cpp: BOOST_TEST_MESSAGE("(C) Copyright Hubert Holin 2003-2005.");
sph_bessel_data.ipp:// Copyright (c) 2007 John Maddock
sph_neumann_data.ipp:// Copyright (c) 2007 John Maddock
spherical_harmonic.ipp:// (C) Copyright John Maddock 2006-7.
std_real_concept_check.cpp:// Copyright John Maddock 2006.
table_type.hpp:// Copyright John Maddock 2012.
test_airy.cpp:// Copyright John Maddock 2012
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test_fisher_f.cpp:// Copyright Paul A. Bristow 2006.
test_fisher_f.cpp:// Copyright John Maddock 2007.
test_fisher_f.cpp: // Distcalc version 1.2 Copyright 2002 H Lohninger, TU Wein
test_gamma.cpp:// (C) Copyright John Maddock 2006.
test_gamma.hpp:// Copyright John Maddock 2006.
test_gamma.hpp:// Copyright Paul A. Bristow 2007, 2009
test_gamma_data.hpp:// (C) Copyright John Maddock 2006.
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test_geometric.cpp:// Copyright Paul A. Bristow 2010.
test_geometric.cpp:// Copyright John Maddock 2010.
test_hankel.cpp:// Copyright John Maddock 2012
test_hermite.cpp:// Copyright John Maddock 2006, 2007
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test_hypergeometric_dist.cpp:// Copyright John Maddock 2008
test_hypergeometric_dist.cpp:// Copyright Paul A. Bristow
test_hypergeometric_dist.cpp:// Copyright Gautam Sewani
test_ibeta.cpp:// (C) Copyright John Maddock 2006.
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test_instances/double_test_instances_4.cpp:// Copyright John Maddock 2011.
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test_instances/float_test_instances_8.cpp:// Copyright John Maddock 2011.
test_instances/double_test_instances_9.cpp:// Copyright John Maddock 2011.
test_instances/Jamfile.v2:# Copyright ohn Maddock 2012
test_instances/real_concept_test_instances_5.cpp:// Copyright John Maddock 2011.
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test_instances/ldouble_test_instances_5.cpp:// Copyright John Maddock 2011.
test_instantiate1.cpp:// Copyright John Maddock 2006.
test_instantiate2.cpp:// Copyright John Maddock 2006.
test_inv_hyp.cpp:// (C) Copyright John Maddock 2006.

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test_inverse_chi_squared.cpp:// Copyright Paul A. Bristow 2010.
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test_inverse_chi_squared_distribution.cpp:// Copyright Paul A. Bristow 2010.
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test_inverse_gamma_distribution.cpp:// Copyright Paul A. Bristow 2010.
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test_inverse_gaussian.cpp:// Copyright Paul A. Bristow 2010.
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test_legacy_nonfinite.cpp:// Copyright (c) 2006 Johan Rade
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test_legendre.cpp:// (C) Copyright John Maddock 2006.
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test_lexical_cast.cpp:// Copyright (c) 2006 Johan Rade
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test_negative_binomial.cpp:// Copyright Paul A. Bristow 2007.
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test_next.cpp:// (C) Copyright John Maddock 2008.
test_nonfinite_io.cpp:// Copyright 2011 Paul A. Bristow
test_nonfinite_trap.cpp:// Copyright (c) 2006 Johan Rade
test_nonfinite_trap.cpp:// Copyright (c) 2011 Paul A. Bristow To incorporate into Boost.Math
test_normal.cpp:// Copyright Paul A. Bristow 2010.
test_normal.cpp:// Copyright John Maddock 2007.
test_out_of_range.hpp:// Copyright John Maddock 2012.
test_owens_t.cpp:// Copyright Paul A. Bristow 2012.
test_owens_t.cpp:// Copyright Benjamin Sobotta 2012.
test_pareto.cpp:// Copyright Paul A. Bristow 2007, 2009.
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test_policy_sf.cpp:// (C) Copyright John Maddock 2007.
test_print_info_on_type.cpp:// Copyright John Maddock 2010.
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test_rational_instances/test_rational_float2.cpp:// (C) Copyright John Maddock 2006-7.
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test_round.cpp:// (C) Copyright John Maddock 2007.
test_sign.cpp:#define BOOST_TEST_MAIN// Copyright John Maddock 2008
test_sign.cpp:// (C) Copyright Paul A. Bristow 2011 (added tests for changesign)
test_signed_zero.cpp:// Copyright 2006 Johan Rade
test_signed_zero.cpp:// Copyright 2011 Paul A. Bristow To incorporate into Boost.Math
test_signed_zero.cpp:// Copyright 2012 Paul A. Bristow with new tests.
test_skew_normal.cpp:// Copyright Paul A. Bristow 2012.
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Name: HiGHS

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```

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----- Forwarded message -----
From: Agner Fog <agner@agner.org>
Date: Wed, Jul 22, 2020 at 8:54 PM
Subject: Re: Add BiasedUrn to SciPy?
To: Matt Haberland <mhaberland@calpoly.edu>
Cc: Warren Weckesser <warren.weckesser@gmail.com>
Dear Matt The C++ code for these distributions without binding to the R project
are available here:
https://www.agner.org/random/stocc.zip
You have my permission to use it in SciPy under the new BSD license.
Best regards,
Agner Fog
On 22/07/2020 17.05, Matt Haberland wrote:
Hi Agner, I'm a maintainer of the Python scientific computing library SciPy,
and I'm working on improving the capabilities of our statistics subpackage
scipy.stats. We'd like to add both Fisher's and Wallenius' noncentral
hypergeometric distributions, but these look quite challenging to implement.
We found your BiasedUrn package, and we'd love to wrap it, but we can't
include GPL-3 licensed code under our BSD-new license. Would you consider
re-licensing BiasedUrn under a more permissive license, such as BSD-new or
MIT, so we can include it in SciPy?
Thank you for considering it!
Matt
--
Matt Haberland
Assistant Professor
BioResource and Agricultural Engineering
08A-3K, Cal Poly

Name: UNU.RAN
License 3-Clause BSD
Permission was granted on 23 March 2021 by Josef Leydold
(josef.leydold@wu.ac.at) and Wolfgang Hoermann (hormannw@bound.edu.tr)
to use the UNU.RAN code excluding the uniform random number
generator in src/uniform/mrg31k3p.c (copyright by Renee Touzin)
under the BSD licence. The following files have been removed
from the original library:
  unuran-1.8.1/COPYING
  unuran-1.8.1/INSTALL
  unuran-1.8.1/Makefile.am
  unuran-1.8.1/Makefile.in
  unuran-1.8.1/NEWS

```

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unuran-1.8.1/aclocal.m4
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unuran-1.8.1/autoconf/config.sub
unuran-1.8.1/autoconf/depcomp
unuran-1.8.1/autoconf/install-sh
unuran-1.8.1/autoconf/ltmain.sh
unuran-1.8.1/autoconf/mdate-sh
unuran-1.8.1/autoconf/missing
unuran-1.8.1/autogen.sh
unuran-1.8.1/configure
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unuran-1.8.1/doc/figures/discrete_inversion.txt
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unuran-1.8.1/doc/figures/rejection_from_constant_hat.txt
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unuran-1.8.1/doc/src/error_debug.dh
unuran-1.8.1/doc/src/examples.dh
unuran-1.8.1/doc/src/glossary.dh
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unuran-1.8.1/doc/src/intro.dh
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unuran-1.8.1/doc/src/methods_cvec.texi
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unuran-1.8.1/doc/src/methods_discr.texi
unuran-1.8.1/doc/src/methods_matr.texi
unuran-1.8.1/doc/src/methods_mcmc.texi
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unuran-1.8.1/doc/src/ref_example0_str.texi
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unuran-1.8.1/doc/src/ref_example_anti.texi
unuran-1.8.1/doc/src/ref_example_anti_str.texi
unuran-1.8.1/doc/src/ref_example_cext.texi
unuran-1.8.1/doc/src/ref_example_cont.texi
unuran-1.8.1/doc/src/ref_example_cont_str.texi
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unuran-1.8.1/doc/src/ref_example_dext.texi
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unuran-1.8.1/doc/src/ref_example_emp.texi
unuran-1.8.1/doc/src/ref_example_emp_str.texi
unuran-1.8.1/doc/src/ref_example_gsl.texi
unuran-1.8.1/doc/src/ref_example_mixt.texi
unuran-1.8.1/doc/src/ref_example_mixt_inv.texi
unuran-1.8.1/doc/src/ref_example_rngstreams.texi
unuran-1.8.1/doc/src/ref_example_vemp.texi
unuran-1.8.1/doc/src/ref_example_win32_1.texi
unuran-1.8.1/doc/src/ref_example_win32_2.texi
unuran-1.8.1/doc/src/references.dh
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unuran-1.8.1/doc/src/texinfo.tex
unuran-1.8.1/doc/src/top.dh
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unuran-1.8.1/doc/stamp-1
unuran-1.8.1/doc/stamp-vti
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unuran-1.8.1/doc/unuran_win32.texi
unuran-1.8.1/doc/unuran_win32_libname.texi
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unuran-1.8.1/doc/version_win32.texi
unuran-1.8.1/examples/Makefile.am
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unuran-1.8.1/examples/example0.c
unuran-1.8.1/examples/example0_str.c
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unuran-1.8.1/examples/example2_str.c
unuran-1.8.1/examples/example3.c
unuran-1.8.1/examples/example3_str.c
unuran-1.8.1/examples/example_FuncStr.c
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unuran-1.8.1/examples/example_prng.c
unuran-1.8.1/examples/example_prng_str.c
unuran-1.8.1/examples/example_rngstreams.c
unuran-1.8.1/examples/example_vemp.c
unuran-1.8.1/experiments/Makefile.am
unuran-1.8.1/experiments/Makefile.in
unuran-1.8.1/experiments/make_timing_table.c
unuran-1.8.1/experiments/timings_chap_10.conf
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unuran-1.8.1/scripts/remove_comments.pl
unuran-1.8.1/scripts/run_valgrind.sh
unuran-1.8.1/scripts/win32/Makefile.win32
unuran-1.8.1/scripts/win32/build.sh
unuran-1.8.1/scripts/win32/example1.c
unuran-1.8.1/scripts/win32/example2.c
unuran-1.8.1/scripts/win32/make_dll_def.pl
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unuran-1.8.1/tests/t_vnrou.conf
unuran-1.8.1/tests/t_x_gen.c
unuran-1.8.1/tests/t_x_gen.conf
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unuran-1.8.1/tests/test_StdDistr.m
unuran-1.8.1/tests/test_functionparser.c
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unuran-1.8.1/tests/testdistributions/vc_w_marginals.c
unuran-1.8.1/tests/testdistributions/vc_wo_logpdf.c
unuran-1.8.1/tests/testroutines.c
unuran-1.8.1/tests/testunuran.h
unuran-1.8.1/src/distr/deprecated_distr.c
unuran-1.8.1/src/distr/deprecated_distr.h
```

```

unuran-1.8.1/src/methods/deprecated_methods.c
unuran-1.8.1/src/methods/deprecated_methods.h
unuran-1.8.1/src/methods/deprecated_tdrwg.h
unuran-1.8.1/src/methods/deprecated_vmt.c
unuran-1.8.1/src/methods/deprecated_vmt.h
unuran-1.8.1/src/methods/deprecated_vmt_struct.h
unuran-1.8.1/src/parser/stringparser_lists.ch.in
UNU.RAN relies on a modified version of the library Cephes, see ./src/src/specfunct/cephes_source.h

```

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.

<https://gist.github.com/imneme/f1f7821f07cf76504a97f6537c818083>

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Files: `scipy/io/_fast_matrix_market/src/pystreambuf.h`

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Name: L-BFGS-B

Files: scipy/optimize/lbfgsb/*

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Name: LAPJVsp

Files: scipy/sparse/csgraph/_matching.pyx

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Name: Faddeeva

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Name: `uarray`

Files: `scipy/_lib/uarray/*`

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Name: `ampgo`

Files: `benchmarks/benchmarks/go_benchmark_functions/*.py`

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<https://code.google.com/archive/p/ampgo>

Name: `pybind11`

Files: no source files are included, however `pybind11` binary artifacts are included with every binary build of SciPy.

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Name: Six
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Name: ID
Files: `scipy/linalg/src/id_dist/*`
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Name: L-BFGS-B
Files: `scipy/optimize/lbfgsb/*`
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Name: PCG64

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PCG Random Number Generation for C.

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The rk_random and rk_seed functions algorithms and the original design of the Mersenne Twister RNG:

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Original algorithm for the implementation of rk_interval function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the rk_double implementation by Isaku Wada.

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Name: Julia

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Files: extra-dll\libopenb*.dll

Description: bundled as a dynamically linked library

Availability: <https://github.com/xianyi/OpenBLAS/>

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Name: LAPACK

Files: extra-dll\libopenb*.dll

Description: bundled in OpenBLAS

Availability: <https://github.com/xianyi/OpenBLAS/>

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Name: dragon4

```

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Name: SPLITMIX64

Written in 2015 by Sebastiano Vigna (vigna@acm.org)

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Name: SFC64

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.

<https://gist.github.com/imneme/f1f7821f07cf76504a97f6537c818083>

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PCG Random Number Generation for C.

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Original algorithm for the implementation of rk_interval function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

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Name: Julia

The ziggurat methods were derived from Julia.

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Name: fast_float

Files: scipy/io/_fast_matrix_market/fast_matrix_market/dependencies/fast_float/*

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Name: ID

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Name: L-BFGS-B

Files: scipy/optimize/lbfgsb/*

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From the website for the L-BFGS-B code (from at
<http://www.ece.northwestern.edu/~nocedal/lbfgsb.html>):

"""

L-BFGS-B is a limited-memory quasi-Newton code for bound-constrained optimization, i.e. for problems where the only constraints are of the form $l \leq x \leq u$.

"""

This is a Python wrapper (using F2PY) written by David M. Cooke <cookedm@physics.mcmaster.ca> and released as version 0.9 on April 9, 2004. The wrapper was slightly modified by Joonas Paalasmaa for the 3.0 version in March 2012.

License of L-BFGS-B (Fortran code)

=====

The version included here (in lbfgsb.f) is 3.0 (released April 25, 2011). It was written by Ciyu Zhu, Richard Byrd, and Jorge Nocedal <nocedal@ece.nwu.edu>. It carries the following condition for use:

"""

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References

- * R. H. Byrd, P. Lu and J. Nocedal. A Limited Memory Algorithm for Bound Constrained Optimization, (1995), SIAM Journal on Scientific and Statistical Computing, 16, 5, pp. 1190-1208.
- * C. Zhu, R. H. Byrd and J. Nocedal. L-BFGS-B: Algorithm 778: L-BFGS-B, FORTRAN routines for large scale bound constrained optimization (1997), ACM Transactions on Mathematical Software, 23, 4, pp. 550 - 560.
- * J.L. Morales and J. Nocedal. L-BFGS-B: Remark on Algorithm 778: L-BFGS-B, FORTRAN routines for large scale bound constrained optimization (2011), ACM Transactions on Mathematical Software, 38, 1.

"""

The Python wrapper

=====

This code uses F2PY (<http://cens.ioc.ee/projects/f2py2e/>) to generate the wrapper around the Fortran code.

The Python code and wrapper are copyrighted 2004 by David M. Cooke <cookedm@physics.mcmaster.ca>.

Example usage

=====

An example of the usage is given at the bottom of the lbfgsb.py file.

Run it with 'python lbfgsb.py'.

License for the Python wrapper

=====

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Name: LAPJVsp

Files: scipy/sparse/csgraph/_matching.pyx

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Description: bundled as a dynamically linked library

Availability: <https://github.com/xianyi/OpenBLAS/>

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```

-----
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statsmodels needs "packaging"
  "packaging" doesn't have any dependencies
statsmodels needs "pandas"
  "pandas" needs "numpy"
    "numpy" has bundled license that are listed below
  "pandas" needs "python-dateutil"
    "python-dateutil" needs "six"
      "six" doesn't have any dependencies
  "pandas" needs "pytz"
    "pytz" doesn't have any dependencies
  "pandas" needs "tzdata"
    "tzdata" doesn't have any dependencies
statsmodels needs "patsy"
  "patsy" needs "numpy"
    "numpy" has bundled license that are listed below
  "patsy" needs "six"
    "six" doesn't have any dependencies
statsmodels needs "scipy"
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```

```

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    From the website for the L-BFGS-B code (from at
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"""
L-BFGS-B is a limited-memory quasi-Newton code for bound-constrained
optimization, i.e. for problems where the only constraints are of the
form l<= x <= u.
"""

This is a Python wrapper (using F2PY) written by David M. Cooke
<cookedm@physics.mcmaster.ca> and released as version 0.9 on April 9, 2004.
The wrapper was slightly modified by Joonas Paalasmaa for the 3.0 version
in March 2012.

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=====
The version included here (in lbfgsb.f) is 3.0 (released April 25, 2011). It was
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    * R. H. Byrd, P. Lu and J. Nocedal. A Limited Memory Algorithm for Bound
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    * C. Zhu, R. H. Byrd and J. Nocedal. L-BFGS-B: Algorithm 778: L-BFGS-B,
      FORTRAN routines for large scale bound constrained optimization (1997),
      ACM Transactions on Mathematical Software, 23, 4, pp. 550 - 560.
    * J.L. Morales and J. Nocedal. L-BFGS-B: Remark on Algorithm 778: L-BFGS-B,
      FORTRAN routines for large scale bound constrained optimization (2011),
      ACM Transactions on Mathematical Software, 38, 1.
"""

The Python wrapper
=====

```

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 =====
 An example of the usage is given at the bottom of the lbfgsb.py file.
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Name: pypocketfft

Files: scipy/fft/_pocketfft/[pocketfft.h, pypocketfft.cxx]

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Name: uarray

Files: scipy/_lib/uarray/*

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Name: ampgo

Files: benchmarks/benchmarks/go_benchmark_functions/*.py

License: MIT

Functions for testing global optimizers, forked from the AMPGO project,
Coded by Andrea Gavana

<https://code.google.com/archive/p/ampgo>

Name: pybind11

Files: no source files are included, however pybind11 binary artifacts are included with every binary build of SciPy.

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Name: HiGHS

Files: scipy/optimize/_highs/*

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Name: Boost

Files: scipy/_lib/boost_math/*

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Name: Biasedurn

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Name: UNU.RAN

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Name: NumPy

Files: scipy/stats/_rcont/[logfactorial.h,logfactorial.c]

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Name: array-api-compat

Files: scipy/_lib/array-api-compat/*

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Name: Tempita

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Name: OpenBLAS

Files: scipy/.dylibs/libopenblas*.so

Description: bundled as a dynamically linked library

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Name: LAPACK

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Description: bundled in OpenBLAS

Availability: <https://github.com/OpenMathLib/OpenBLAS/>

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Name: libquadmath

Files: scipy/.dylibs/libquadmath*.so

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Tesseract

Tesseract

```
* File:      tesseract.cpp
* Description: Main program for merge of tess and editor.
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TinyXML2

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/*
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Original code by Lee Thomason (www.grinninglizard.com)
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Requests

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certifi

This package contains a modified version of ca-bundle.crt:

ca-bundle.crt -- Bundle of CA Root Certificates

Certificate data from Mozilla as of: Thu Nov 3 19:04:19 2011#

This is a bundle of X.509 certificates of public Certificate Authorities (CA). These were automatically extracted from Mozilla's root certificates file (certdata.txt). This file can be found in the mozilla source tree:

<http://mxr.mozilla.org/mozilla/source/security/nss/lib/ckfw/builtins/certdata.txt?raw=1#>

It contains the certificates in PEM format and therefore can be directly used with curl / libcurl / php_curl, or with an Apache+mod_ssl webserver for SSL client authentication.

Just configure this file as the SSLCertificateFile.#

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@(#) \$RCSfile: certdata.txt,v \$ \$Revision: 1.80 \$ \$Date: 2011/11/03 15:11:58 \$

charset-normalizer

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Files: .libs/libopenb*.so

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Name: L-BFGS-B

Files: `scipy/optimize/lbfgsb/*`

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Name: LAPJVsp

Files: `scipy/sparse/csgraph/_matching.pyx`

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Name: Faddeeva

Files: scipy/special/Faddeeva.*

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Files: scipy/fft/_pocketfft/[pocketfft.h, pypocketfft.cxx]

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Name: uarray

Files: scipy/_lib/uarray/*

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Name: ampgo

Files: benchmarks/benchmarks/go_benchmark_functions/*.py

License: MIT

Functions for testing global optimizers, forked from the AMPGO project,
<https://code.google.com/archive/p/ampgo>

Name: pybind11

Files: no source files are included, however pybind11 binary artifacts are included with every binary build of SciPy.

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Name: L-BFGS-B

This is a Python wrapper (using F2PY) written by David M. Cooke <cookedm@physics.mcmaster.ca> and released as version 0.9 on April 9, 2004. The wrapper was slightly modified by Joonas Paalasmaa for the 3.0 version in March 2012.

The version included here (in lbfgsb.f) is 3.0 (released April 25, 2011). It was written by Ciyu Zhu, Richard Byrd, and Jorge Nocedal <nocedal@ece.nwu.edu>. It carries the following condition for use:

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References

- * R. H. Byrd, P. Lu and J. Nocedal. A Limited Memory Algorithm for Bound Constrained Optimization, (1995), SIAM Journal on Scientific and Statistical Computing, 16, 5, pp. 1190-1208.
- * C. Zhu, R. H. Byrd and J. Nocedal. L-BFGS-B: Algorithm 778: L-BFGS-B, FORTRAN routines for large scale bound constrained optimization (1997), ACM Transactions on Mathematical Software, 23, 4, pp. 550 - 560.
- * J.L. Morales and J. Nocedal. L-BFGS-B: Remark on Algorithm 778: L-BFGS-B, FORTRAN routines for large scale bound constrained optimization (2011), ACM Transactions on Mathematical Software, 38, 1.

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The Python wrapper

This code uses F2PY (<http://cens.ioc.ee/projects/f2py2e/>) to generate the wrapper around the Fortran code.

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Name: Biasedurn

----- Forwarded message -----

From: Agner Fog <agner@agner.org>

Date: Wed, Jul 22, 2020 at 8:54 PM

Subject: Re: Add BiasedUrn to SciPy?

To: Matt Haberland <mhaberland@calpoly.edu>

Cc: Warren Weckesser <warren.weckesser@gmail.com>

Dear Matt The C++ code for these distributions without binding to the R project are available here:

<https://www.agner.org/random/stocc.zip>

You have my permission to use it in SciPy under the new BSD license.

Best regards,

Agner Fog

On 22/07/2020 17.05, Matt Haberland wrote:

Hi Agner, I'm a maintainer of the Python scientific computing library SciPy, and I'm working on improving the capabilities of our statistics subpackage scipy.stats. We'd like to add both Fisher's and Wallenius' noncentral hypergeometric distributions, but these look quite challenging to implement. We found your BiasedUrn package, and we'd love to wrap it, but we can't include GPL-3 licensed code under our BSD-new license. Would you consider re-licensing BiasedUrn under a more permissive license, such as BSD-new or

MIT, so we can include it in SciPy?

Thank you for considering it!

Matt

--

Matt Haberland

Assistant Professor

BioResource and Agricultural Engineering

08A-3K, Cal Poly

Name: UNU.RAN

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unuran-1.8.1/doc/src/methods_discr.texi
unuran-1.8.1/doc/src/methods_matr.texi
unuran-1.8.1/doc/src/methods_mcmc.texi
unuran-1.8.1/doc/src/misc.dh
unuran-1.8.1/doc/src/ref_example0.texi
unuran-1.8.1/doc/src/ref_example0_str.texi
unuran-1.8.1/doc/src/ref_example1.texi
unuran-1.8.1/doc/src/ref_example1_str.texi
unuran-1.8.1/doc/src/ref_example2.texi
unuran-1.8.1/doc/src/ref_example2_str.texi
unuran-1.8.1/doc/src/ref_example3.texi
unuran-1.8.1/doc/src/ref_example3_str.texi
unuran-1.8.1/doc/src/ref_example_FuncStr.texi
unuran-1.8.1/doc/src/ref_example_anti.texi
unuran-1.8.1/doc/src/ref_example_anti_str.texi
unuran-1.8.1/doc/src/ref_example_cext.texi
unuran-1.8.1/doc/src/ref_example_cont.texi
unuran-1.8.1/doc/src/ref_example_cont_str.texi
unuran-1.8.1/doc/src/ref_example_dext.texi
unuran-1.8.1/doc/src/ref_example_discr.texi
unuran-1.8.1/doc/src/ref_example_discr_str.texi
unuran-1.8.1/doc/src/ref_example_emp.texi
unuran-1.8.1/doc/src/ref_example_emp_str.texi
unuran-1.8.1/doc/src/ref_example_gsl.texi
unuran-1.8.1/doc/src/ref_example_mixt.texi
unuran-1.8.1/doc/src/ref_example_mixt_inv.texi
unuran-1.8.1/doc/src/ref_example_rngstreams.texi
unuran-1.8.1/doc/src/ref_example_vemp.texi
unuran-1.8.1/doc/src/ref_example_win32_1.texi
unuran-1.8.1/doc/src/ref_example_win32_2.texi
unuran-1.8.1/doc/src/references.dh
unuran-1.8.1/doc/src/stdtdist.dh
unuran-1.8.1/doc/src/texinfo.tex
unuran-1.8.1/doc/src/top.dh
unuran-1.8.1/doc/src/unuran_src.texi
unuran-1.8.1/doc/stamp-1
unuran-1.8.1/doc/stamp-vti
unuran-1.8.1/doc/unuran.html
unuran-1.8.1/doc/unuran.info
unuran-1.8.1/doc/unuran.pdf
unuran-1.8.1/doc/unuran.texi
unuran-1.8.1/doc/unuran.txt
unuran-1.8.1/doc/unuran_win32.html
unuran-1.8.1/doc/unuran_win32.info
unuran-1.8.1/doc/unuran_win32.pdf
unuran-1.8.1/doc/unuran_win32.texi
unuran-1.8.1/doc/unuran_win32_libname.texi
unuran-1.8.1/doc/version.texi
unuran-1.8.1/doc/version_win32.texi
unuran-1.8.1/examples/Makefile.am
unuran-1.8.1/examples/Makefile.in
unuran-1.8.1/examples/example0.c
unuran-1.8.1/examples/example0_str.c
unuran-1.8.1/examples/example1.c
unuran-1.8.1/examples/example1_str.c
unuran-1.8.1/examples/example2.c
unuran-1.8.1/examples/example2_str.c
unuran-1.8.1/examples/example3.c
unuran-1.8.1/examples/example3_str.c
unuran-1.8.1/examples/example_FuncStr.c
unuran-1.8.1/examples/example_anti.c
unuran-1.8.1/examples/example_anti_str.c
unuran-1.8.1/examples/example_cext.c
```

```
unuran-1.8.1/examples/example_cont.c
unuran-1.8.1/examples/example_cont_str.c
unuran-1.8.1/examples/example_cpp.cpp
unuran-1.8.1/examples/example_dext.c
unuran-1.8.1/examples/example_discr.c
unuran-1.8.1/examples/example_discr_str.c
unuran-1.8.1/examples/example_emp.c
unuran-1.8.1/examples/example_emp_str.c
unuran-1.8.1/examples/example_errorhandler.c
unuran-1.8.1/examples/example_gsl.c
unuran-1.8.1/examples/example_mcorr.c
unuran-1.8.1/examples/example_mixt.c
unuran-1.8.1/examples/example_mixt_inv.c
unuran-1.8.1/examples/example_prng.c
unuran-1.8.1/examples/example_prng_str.c
unuran-1.8.1/examples/example_rngstreams.c
unuran-1.8.1/examples/example_vemp.c
unuran-1.8.1/experiments/Makefile.am
unuran-1.8.1/experiments/Makefile.in
unuran-1.8.1/experiments/make_timing_table.c
unuran-1.8.1/experiments/timings_chap_10.conf
unuran-1.8.1/experiments/timings_chap_8.conf
unuran-1.8.1/scripts/Makefile.am
unuran-1.8.1/scripts/Makefile.in
unuran-1.8.1/scripts/compute_machine_constants.c
unuran-1.8.1/scripts/make_urng_header.pl
unuran-1.8.1/scripts/merge_h.pl
unuran-1.8.1/scripts/read_PDF.pl
unuran-1.8.1/scripts/remove_comments.pl
unuran-1.8.1/scripts/run_valgrind.sh
unuran-1.8.1/scripts/win32/Makefile.win32
unuran-1.8.1/scripts/win32/build.sh
unuran-1.8.1/scripts/win32/example1.c
unuran-1.8.1/scripts/win32/example2.c
unuran-1.8.1/scripts/win32/make_dll_def.pl
unuran-1.8.1/src/Makefile.am
unuran-1.8.1/src/Makefile.in
unuran-1.8.1/src/README
unuran-1.8.1/src/distr/Makefile.am
unuran-1.8.1/src/distr/Makefile.in
unuran-1.8.1/src/distributions/Makefile.am
unuran-1.8.1/src/distributions/Makefile.in
unuran-1.8.1/src/distributions/README
unuran-1.8.1/src/methods/Makefile.am
unuran-1.8.1/src/methods/Makefile.in
unuran-1.8.1/src/parser/Makefile.am
unuran-1.8.1/src/parser/Makefile.in
unuran-1.8.1/src/parser/functparser_doc.dh
unuran-1.8.1/src/parser/make_stringparser.pl
unuran-1.8.1/src/parser/stringparser_doc.dh
unuran-1.8.1/src/specfunct/Makefile.am
unuran-1.8.1/src/specfunct/Makefile.in
unuran-1.8.1/src/tests/Makefile.am
unuran-1.8.1/src/tests/Makefile.in
unuran-1.8.1/src/uniform/Makefile.am
unuran-1.8.1/src/uniform/Makefile.in
unuran-1.8.1/src/uniform/fish.c
unuran-1.8.1/src/uniform/mrg31k3p.c
unuran-1.8.1/src/uniform/mstd.c
unuran-1.8.1/src/uniform/unuran_urng_gsl.h
unuran-1.8.1/src/uniform/unuran_urng_prng.h
unuran-1.8.1/src/uniform/unuran_urng_rngstreams.h
unuran-1.8.1/src/uniform/urng_builtin.c
unuran-1.8.1/src/uniform/urng_builtin.h
unuran-1.8.1/src/uniform/urng_fvoid.c
unuran-1.8.1/src/uniform/urng_fvoid.h
unuran-1.8.1/src/uniform/urng_gsl.c
```

```
unuran-1.8.1/src/uniform/urng_gsl.h
unuran-1.8.1/src/uniform/urng_gslqrng.c
unuran-1.8.1/src/uniform/urng_gslqrng.h
unuran-1.8.1/src/uniform/urng_prng.c
unuran-1.8.1/src/uniform/urng_prng.h
unuran-1.8.1/src/uniform/urng_randomshift.c
unuran-1.8.1/src/uniform/urng_randomshift.h
unuran-1.8.1/src/uniform/urng_rngstreams.c
unuran-1.8.1/src/uniform/urng_rngstreams.h
unuran-1.8.1/src/unuran.h.in
unuran-1.8.1/src/urng/Makefile.am
unuran-1.8.1/src/urng/Makefile.in
unuran-1.8.1/src/utls/Makefile.am
unuran-1.8.1/src/utls/Makefile.in
unuran-1.8.1/tests/Makefile.am
unuran-1.8.1/tests/Makefile.in
unuran-1.8.1/tests/README.conf
unuran-1.8.1/tests/make_test_files.pl
unuran-1.8.1/tests/t_arou.c
unuran-1.8.1/tests/t_arou.conf
unuran-1.8.1/tests/t_ars.c
unuran-1.8.1/tests/t_ars.conf
unuran-1.8.1/tests/t_auto.c
unuran-1.8.1/tests/t_auto.conf
unuran-1.8.1/tests/t_cext.c
unuran-1.8.1/tests/t_cext.conf
unuran-1.8.1/tests/t_cstd.c
unuran-1.8.1/tests/t_cstd.conf
unuran-1.8.1/tests/t_dari.c
unuran-1.8.1/tests/t_dari.conf
unuran-1.8.1/tests/t_dau.c
unuran-1.8.1/tests/t_dau.conf
unuran-1.8.1/tests/t_deprecated_tdrwg.c
unuran-1.8.1/tests/t_deprecated_vmt.c
unuran-1.8.1/tests/t_deprecated_vmt.conf
unuran-1.8.1/tests/t_dext.c
unuran-1.8.1/tests/t_dext.conf
unuran-1.8.1/tests/t_dgt.c
unuran-1.8.1/tests/t_dgt.conf
unuran-1.8.1/tests/t_distr.c
unuran-1.8.1/tests/t_distr.conf
unuran-1.8.1/tests/t_distr_cemp.c
unuran-1.8.1/tests/t_distr_cemp.conf
unuran-1.8.1/tests/t_distr_condi.c
unuran-1.8.1/tests/t_distr_condi.conf
unuran-1.8.1/tests/t_distr_cont.c
unuran-1.8.1/tests/t_distr_cont.conf
unuran-1.8.1/tests/t_distr_corder.c
unuran-1.8.1/tests/t_distr_corder.conf
unuran-1.8.1/tests/t_distr_cvec.c
unuran-1.8.1/tests/t_distr_cvec.conf
unuran-1.8.1/tests/t_distr_cvemp.c
unuran-1.8.1/tests/t_distr_cvemp.conf
unuran-1.8.1/tests/t_distr_cxtrans.c
unuran-1.8.1/tests/t_distr_cxtrans.conf
unuran-1.8.1/tests/t_distr_discr.c
unuran-1.8.1/tests/t_distr_discr.conf
unuran-1.8.1/tests/t_distr_matr.c
unuran-1.8.1/tests/t_distr_matr.conf
unuran-1.8.1/tests/t_dsrou.c
unuran-1.8.1/tests/t_dsrou.conf
unuran-1.8.1/tests/t_dss.c
unuran-1.8.1/tests/t_dss.conf
unuran-1.8.1/tests/t_dstd.c
unuran-1.8.1/tests/t_dstd.conf
unuran-1.8.1/tests/t_empk.c
unuran-1.8.1/tests/t_empk.conf
```

```
unuran-1.8.1/tests/t_empl.c
unuran-1.8.1/tests/t_empl.conf
unuran-1.8.1/tests/t_gibbs.c
unuran-1.8.1/tests/t_gibbs.conf
unuran-1.8.1/tests/t_hinv.c
unuran-1.8.1/tests/t_hinv.conf
unuran-1.8.1/tests/t_hist.c
unuran-1.8.1/tests/t_hist.conf
unuran-1.8.1/tests/t_hitro.c
unuran-1.8.1/tests/t_hrb.c
unuran-1.8.1/tests/t_hrb.conf
unuran-1.8.1/tests/t_hrd.c
unuran-1.8.1/tests/t_hrd.conf
unuran-1.8.1/tests/t_hri.c
unuran-1.8.1/tests/t_hri.conf
unuran-1.8.1/tests/t_info.c
unuran-1.8.1/tests/t_info.conf
unuran-1.8.1/tests/t_itdr.c
unuran-1.8.1/tests/t_itdr.conf
unuran-1.8.1/tests/t_mcorr.c
unuran-1.8.1/tests/t_mcorr.conf
unuran-1.8.1/tests/t_mixt.c
unuran-1.8.1/tests/t_mvstd.c
unuran-1.8.1/tests/t_mvstd.conf
unuran-1.8.1/tests/t_mvtdr.c
unuran-1.8.1/tests/t_ninv.c
unuran-1.8.1/tests/t_ninv.conf
unuran-1.8.1/tests/t_norta.c
unuran-1.8.1/tests/t_norta.conf
unuran-1.8.1/tests/t_nrou.c
unuran-1.8.1/tests/t_nrou.conf
unuran-1.8.1/tests/t_pinv
unuran-1.8.1/tests/t_pinv.c
unuran-1.8.1/tests/t_srou.c
unuran-1.8.1/tests/t_srou.conf
unuran-1.8.1/tests/t_ssr.c
unuran-1.8.1/tests/t_ssr.conf
unuran-1.8.1/tests/t_stringparser.c
unuran-1.8.1/tests/t_stringparser.conf
unuran-1.8.1/tests/t_tabl.c
unuran-1.8.1/tests/t_tabl.conf
unuran-1.8.1/tests/t_tdr.c
unuran-1.8.1/tests/t_tdr.conf
unuran-1.8.1/tests/t_tdr_gw.c
unuran-1.8.1/tests/t_tdr_gw.conf
unuran-1.8.1/tests/t_tdr_ia.c
unuran-1.8.1/tests/t_tdr_ia.conf
unuran-1.8.1/tests/t_tdr_ps.c
unuran-1.8.1/tests/t_tdr_ps.conf
unuran-1.8.1/tests/t_unif.c
unuran-1.8.1/tests/t_unif.conf
unuran-1.8.1/tests/t_unur_error.c
unuran-1.8.1/tests/t_unur_error.conf
unuran-1.8.1/tests/t_unur_tests.c
unuran-1.8.1/tests/t_unur_tests.conf
unuran-1.8.1/tests/t_urng.c
unuran-1.8.1/tests/t_urng.conf
unuran-1.8.1/tests/t_utdr.c
unuran-1.8.1/tests/t_utdr.conf
unuran-1.8.1/tests/t_util_matrix.c
unuran-1.8.1/tests/t_util_matrix.conf
unuran-1.8.1/tests/t_vempk.c
unuran-1.8.1/tests/t_vempk.conf
unuran-1.8.1/tests/t_vnrou.c
unuran-1.8.1/tests/t_vnrou.conf
unuran-1.8.1/tests/t_x_gen.c
unuran-1.8.1/tests/t_x_gen.conf
```

```

unuran-1.8.1/tests/test_StdDistr.c
unuran-1.8.1/tests/test_StdDistr.m
unuran-1.8.1/tests/test_functionparser.c
unuran-1.8.1/tests/test_functionparser.m
unuran-1.8.1/tests/testcounter.c
unuran-1.8.1/tests/testdistributions/Makefile.am
unuran-1.8.1/tests/testdistributions/Makefile.in
unuran-1.8.1/tests/testdistributions/c_sawtooth_contpdf.c
unuran-1.8.1/tests/testdistributions/c_sawtooth_discpdf.c
unuran-1.8.1/tests/testdistributions/c_w_pdf_from_logpdf.c
unuran-1.8.1/tests/testdistributions/c_with_multiple_of_pdf.c
unuran-1.8.1/tests/testdistributions/c_wo_logpdf.c
unuran-1.8.1/tests/testdistributions/testdistributions.h
unuran-1.8.1/tests/testdistributions/vc_cauchy_RoU_ball.c
unuran-1.8.1/tests/testdistributions/vc_special_correlations_ar1.c
unuran-1.8.1/tests/testdistributions/vc_special_correlations_constantrho.c
unuran-1.8.1/tests/testdistributions/vc_w_marginals.c
unuran-1.8.1/tests/testdistributions/vc_wo_logpdf.c
unuran-1.8.1/tests/testroutines.c
unuran-1.8.1/tests/testunuran.h
unuran-1.8.1/src/distr/deprecated_distr.c
unuran-1.8.1/src/distr/deprecated_distr.h
unuran-1.8.1/src/methods/deprecated_methods.c
unuran-1.8.1/src/methods/deprecated_methods.h
unuran-1.8.1/src/methods/deprecated_tdrwg.h
unuran-1.8.1/src/methods/deprecated_vmt.c
unuran-1.8.1/src/methods/deprecated_vmt.h
unuran-1.8.1/src/methods/deprecated_vmt_struct.h
unuran-1.8.1/src/parser/stringparser_lists.ch.in
UNU.RAN relies on a modified version of the library Cephес, see ./src/src/specfunct/cephes_source.h

```

Details from /src/src/specfunct/cephes_source.h

This file was considerably changed for UNU.RAN.
As a consequence it has been renamed from "mconf.h" to
"cephes_source.h" to avoid confusion.

We were only interested in the files:

```

gamma.c
igamma.c
incbet.c
ndtr.c
ndtri.c

```

to use these files we needed the auxiliary files:

```

isnan.c
mtherr.c
polevl.c

```

The aim was to enhance portability for ANSI C without expert
knowledge of the floating point unit.

The main changes are

```

numeric constants (in cephes - const.c) are replaced
by macros defined in this file (source_mconf.h).
We changed these constants using the constants provided by
ANSI C in the math.h file.
We changed also the definitions of MAXGAM (in incbet.c) and of
MAXSTIR (in gamma.c).
Everything concerning NANS and INFINITY was moved into isnan.c.
(Also the defines to turn it off or on.)
We have only tested this version with NAN and INFINITY turned
off, but we have not changed anything concerning that
question. So turning this support on should (could) work.

```

March 26th, 2001, Josef Leydold and Wolfgang Hoermann.

```

/*-----*/
/*
 *      mconf.h
 *

```

```

* Common include file for math routines
*
*
*
* SYNOPSIS:
*
* #include "mconf.h"
*
*
*
* DESCRIPTION:
*
* This file contains definitions for error codes that are
* passed to the common error handling routine mterr()
* (which see).
*
* The file also includes a conditional assembly definition
* for the type of computer arithmetic (IEEE, DEC, Motorola
* IEEE, or UNKNOWN).
*
* For Digital Equipment PDP-11 and VAX computers, certain
* IBM systems, and others that use numbers with a 56-bit
* significand, the symbol DEC should be defined. In this
* mode, most floating point constants are given as arrays
* of octal integers to eliminate decimal to binary conversion
* errors that might be introduced by the compiler.
*
* For little-endian computers, such as IBM PC, that follow the
* IEEE Standard for Binary Floating Point Arithmetic (ANSI/IEEE
* Std 754-1985), the symbol IBMPC should be defined. These
* numbers have 53-bit significands. In this mode, constants
* are provided as arrays of hexadecimal 16 bit integers.
*
* Big-endian IEEE format is denoted MIEEE. On some RISC
* systems such as Sun SPARC, double precision constants
* must be stored on 8-byte address boundaries. Since integer
* arrays may be aligned differently, the MIEEE configuration
* may fail on such machines.
*
* To accommodate other types of computer arithmetic, all
* constants are also provided in a normal decimal radix
* which one can hope are correctly converted to a suitable
* format by the available C language compiler. To invoke
* this mode, define the symbol UNK.
*
* An important difference among these modes is a predefined
* set of machine arithmetic constants for each. The numbers
* MACHEP (the machine roundoff error), MAXNUM (largest number
* represented), and several other parameters are preset by
* the configuration symbol. Check the file const.c to
* ensure that these values are correct for your computer.
*
* Configurations NANS, INFINITIES, MINUSZERO, and DENORMAL
* may fail on many systems. Verify that they are supposed
* ----- * to work on your computer.
*/

```

Cephes Math Library Release 2.3: June, 1995
 Copyright 1984, 1987, 1989, 1995 by Stephen L. Moshier

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```

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Files: extra-dll\libopenb*.dll

Description: bundled in OpenBLAS

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Original algorithm for the implementation of `rk_interval` function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

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The ziggurat methods were derived from Julia.

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----- Forwarded message -----

From: Agner Fog <agner@agner.org>

Date: Wed, Jul 22, 2020 at 8:54 PM

Subject: Re: Add BiasedUrn to SciPy?

To: Matt Haberland <mhaberland@calpoly.edu>

Cc: Warren Weckesser <warren.weckesser@gmail.com>

Dear Matt The C++ code for these distributions without binding to the R project are available here:

<https://www.agner.org/random/stocc.zip>

You have my permission to use it in SciPy under the new BSD license.

Best regards,
Agner Fog

On 22/07/2020 17.05, Matt Haberland wrote:

Hi Agner, I'm a maintainer of the Python scientific computing library SciPy, and I'm working on improving the capabilities of our statistics subpackage scipy.stats. We'd like to add both Fisher's and Wallenius' noncentral hypergeometric distributions, but these look quite challenging to implement. We found your BiasedUrn package, and we'd love to wrap it, but we can't include GPL-3 licensed code under our BSD-new license. Would you consider re-licensing BiasedUrn under a more permissive license, such as BSD-new or MIT, so we can include it in SciPy?
Thank you for considering it!

Matt

--

Matt Haberland
Assistant Professor
BioResource and Agricultural Engineering
08A-3K, Cal Poly

Name: UNU.RAN

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Google Protocol Buffer

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High Efficiency Video Decoding (libde265)

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libwebp

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Files:

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infra/common.sh
infra/compile.sh
infra/compile_android.sh
infra/compile_js.sh
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Files:

sharpvuv/sharpvuv_dsp.h

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Speed-critical functions for Sharp YUV.

Files:

imageio/image_enc.h

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All-in-one library to save PNG/JPEG/WebP/TIFF/WIC images.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/cost_sse2.c

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SSE2 version of cost functions

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/dec_clip_tables.c

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Clipping tables for filtering

Author: Skal (pascal.massimino@gmail.com)

Files:

src/webp/format_constants.h

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Internal header for constants related to WebP file format.

Author: Urvang (urvang@google.com)

Files:

src/dsp/cost_mips32.c

src/dsp/cost_mips_dsp_r2.c

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Author: Djordje Pesut (djordje.pesut@imgtec.com)

Files:

extras/extras.h

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Files:

src/dsp/filters.c
src/utils/filters_utils.h

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Spatial prediction using various filters

Author: Urvang (urvang@google.com)

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Bit writing and boolean coder

Author: Skal (pascal.massimino@gmail.com)
Vikas Arora (vikaas.arora@gmail.com)

Files:

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Alpha-plane compression.

Author: Skal (pascal.massimino@gmail.com)

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RIFF container manipulation and encoding for WebP images.

Authors: Urvang (urvang@google.com)
Vikas (vikasa@google.com)

## Files:

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sharpvuv/sharpyuv_csp.h

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Colorspace utilities.

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SSE2 Rescaling functions

Author: Skal (pascal.massimino@gmail.com)

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VP8 decoder: internal header.

Author: Skal (pascal.massimino@gmail.com)

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Quantizer initialization

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Header syntax writing

Author: Skal (pascal.massimino@gmail.com)

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Spatial prediction using various filters

Author(s): Branimir Vasic (branimir.vasic@imgtec.com)
Djordje Pesut (djordje.pesut@imgtec.com)

Files:

src/mux/animi.h

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Internal header for animation related functions.

Author: Hui Su (huisu@google.com)

Files:

src/dsp/upsampling_mips_dsp_r2.c

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YUV to RGB upsampling functions.

Author(s): Branimir Vasic (branimir.vasic@imgtec.com)
Djordje Pesut (djordje.pesut@imgtec.com)

Files:

src/utils/utils.h

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Misc. common utility functions

Authors: Skal (pascal.massimino@gmail.com)
Urvang (urvang@google.com)

Files:

tests/fuzzer/animdecoder_fuzzer.cc

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examples/anim_diff.c

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Checks if given pair of animated GIF/WebP images are identical:
That is: their reconstructed canvases match pixel-by-pixel and their other
animation properties (loop count etc) also match.

example: anim_diff foo.gif bar.webp

Files:

src/dec/vp8l_dec.c

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main entry for the decoder

Authors: Vikas Arora (vikaas.arora@gmail.com)
Jyrki Alakuijala (jyrki@google.com)

Files:

src/mux/muxi.h

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Internal header for mux library.

```

Author: Urvang (urvang@google.com)

## Files:

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Bit writing and boolean coder

Author: Skal (pascal.massimino@gmail.com)

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Color Cache for WebP Lossless

Authors: Jyrki Alakuijala (jyrki@google.com)
Urvang Joshi (urvang@google.com)

## Files:

tests/fuzzer/advanced_api_fuzzer.c
tests/fuzzer/animation_api_fuzzer.c
tests/fuzzer/animencoder_fuzzer.cc
tests/fuzzer/enc_dec_fuzzer.cc
tests/fuzzer/fuzz_utils.h
tests/fuzzer/img_alpha.h
tests/fuzzer/img_grid.h
tests/fuzzer/img_peak.h
tests/fuzzer/mux_demux_api_fuzzer.c
tests/fuzzer/simple_api_fuzzer.c

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src/utils/bit_reader_utils.h

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Boolean decoder

Author: Skal (pascal.massimino@gmail.com)
Vikas Arora (vikaas.arora@gmail.com)

Files:

src/dsp/alpha_processing_mips_dsp_r2.c

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Utilities for processing transparent channel.

Author(s): Branimir Vasic (branimir.vasic@imgtec.com)
Djordje Pesut (djordje.pesut@imgtec.com)

Files:

imageio/wicdec.c
imageio/wicdec.h

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Windows Imaging Component (WIC) decode.

Files:

src/dsp/dec.c

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Speed-critical decoding functions, default plain-C implementations.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/lossless_mips_dsp_r2.c

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Image transforms and color space conversion methods for lossless decoder.

Author(s): Djordje Pesut (djordje.pesut@imgtec.com)
Jovan Zelincevic (jovan.zelincevic@imgtec.com)

Files:

src/dsp/filters_neon.c

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NEON variant of alpha filters

Author: Skal (pascal.massimino@gmail.com)

Files:

src/enc/vp8l_enc.c

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main entry for the lossless encoder.

Author: Vikas Arora (vikaas.arora@gmail.com)

Files:

src/dsp/lossless_msa.c

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MSA variant of methods for lossless decoder

Author: Prashant Patil (prashant.patil@imgtec.com)

Files:

src/dsp/enc.c

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Speed-critical encoding functions.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/cost.c

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Author: Skal (pascal.massimino@gmail.com)

Files:

src/utils/quant_levels_dec_utils.c

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Implement gradient smoothing: we replace a current alpha value by its surrounding average if it's close enough (that is: the change will be less than the minimum distance between two quantized level).
We use sliding window for computing the 2d moving average.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dec/alpha_dec.c

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Alpha-plane decompression.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/webp/demux.h

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Demux API.

Enables extraction of image and extended format data from WebP files.

Files:

extras/get_disto.c

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Simple tool to load two webp/png/jpg/tiff files and compute PSNR/SSIM. This is mostly a wrapper around WebPPictureDistortion().

Files:

src/dsp/upsampling_sse41.c

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SSE41 version of YUV to RGB upsampling functions.

Author: somnath@google.com (Somnath Banerjee)

Files:

sharpuyv/sharpyuv_cpu.c
sharpuyv/sharpyuv_cpu.h

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## Files:
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```
## Files:
```

```
imageio/image_dec.h
```

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```
-----
```

All-in-one library to decode PNG/JPEG/WebP/TIFF/WIC input images.

Author: Skal (pascal.massimino@gmail.com)

```
## Files:
```

```
src/dsp/lossless.c
```

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```
-----
```

Image transforms and color space conversion methods for lossless decoder.

Authors: Vikas Arora (vikaas.arora@gmail.com)

Jyrki Alakuijala (jyrki@google.com)

Urvang Joshi (urvang@google.com)

```
## Files:
```

```
src/dsp/yuv_sse2.c
src/dsp/yuv_sse41.c
```

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YUV->RGB conversion functions

Author: Skal (pascal.massimino@gmail.com)

Files:

```
src/dsp/lossless_common.h
```

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Image transforms and color space conversion methods for lossless decoder.

Authors: Vikas Arora (vikaas.arora@gmail.com)
 Jyrki Alakuijala (jyrki@google.com)
 Vincent Rabaud (vrabaud@google.com)

Files:

```
src/dsp/rescaler_msa.c
```

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MSA version of rescaling functions

Author: Prashant Patil (prashant.patil@imgtec.com)

Files:

```
src/mux/anim_encode.c
```

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AnimEncoder implementation.

```
## Files:
```

```
src/utils/huffman_utils.c
src/utils/huffman_utils.h
```

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Utilities for building and looking up Huffman trees.

Author: Urvang Joshi (urvang@google.com)

```
## Files:
```

```
src/dsp/lossless_enc_mips_dsp_r2.c
```

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Image transform methods for lossless encoder.

Author(s): Djordje Pesut (djordje.pesut@imgtec.com)
Jovan Zelincevic (jovan.zelincevic@imgtec.com)

```
## Files:
```

```
src/utils/thread_utils.c
src/utils/thread_utils.h
```

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Multi-threaded worker

Author: Skal (pascal.massimino@gmail.com)

```
## Files:
```

```
imageio/image_dec.c
```

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Generic image-type guessing.

Files:

src/utils/color_cache_utils.c

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Color Cache for WebP Lossless

Author: Jyrki Alakuijala (jyrki@google.com)

Files:

src/dec/vp8li_dec.h

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Lossless decoder: internal header.

Author: Skal (pascal.massimino@gmail.com)
Vikas Arora(vikaas.arora@gmail.com)

Files:

src/dsp/dec_neon.c

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ARM NEON version of dsp functions and loop filtering.

Authors: Somnath Banerjee (somnath@google.com)
Johann Koenig (johannkoenig@google.com)

Files:

src/dsp/quant.h

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```
## Files:
```

```
src/dsp/ssim_sse2.c
```

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-----
```

```
SSE2 version of distortion calculation
```

```
Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:
```

```
src/dec/common_dec.h
```

```
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```

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-----
```

```
Definitions and macros common to encoding and decoding
```

```
Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:
```

```
src/dsp/yuv.h
```

```
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```

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-----
```

```
## Files:
```

```
examples/unicode_gif.h
```

```
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```

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-----
```

```
giflib doesn't have a Unicode DGifOpenFileName(). Let's make one.
```

```
Author: Yannis Guyon (yguyon@google.com)
```

```
## Files:
```

```
src/dec/webpi_dec.h
```

```
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```

```
-----
Internal header: WebP decoding parameters and custom IO on buffer
```

```
Author: somnath@google.com (Somnath Banerjee)
```

```
## Files:
```

```
examples/img2webp.c
```

```
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```

```
-----
generate an animated WebP out of a sequence of images
(PNG, JPEG, ...)
```

```
Example usage:
```

```
img2webp -o out.webp -q 40 -mixed -duration 40 input??.png
```

```
Author: skal@google.com (Pascal Massimino)
```

```
## Files:
```

```
src/webp/mux_types.h
```

```
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```

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```

```
-----
Data-types common to the mux and demux libraries.
```

```
Author: Urvang (urvang@google.com)
```

```
## Files:
```

```
src/dsp/enc_neon.c
```

```
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```

```
-----
ARM NEON version of speed-critical encoding functions.
```

```
adapted from libvpx (https://www.webmproject.org/code/)

## Files:

src/enc/picture_tools_enc.c

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WebPPicture tools: alpha handling, etc.

Author: Skal (pascal.massimino@gmail.com)

## Files:

imageio/pnmdec.h

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partial PNM format decoder (ppm/pgm)

## Files:

src/dsp/dsp.h

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Speed-critical functions.

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/enc/histogram_enc.h

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Author: Jyrki Alakuijala (jyrki@google.com)
```

Models the histograms of literal and distance codes.

Files:

src/utils/quant_levels_dec_utils.h

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Alpha plane de-quantization utility

Author: Vikas Arora (vikasa@google.com)

Files:

src/utils/huffman_encode_utils.h

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Author: Jyrki Alakuijala (jyrki@google.com)

Entropy encoding (Huffman) for webp lossless

Files:

imageio/imageio_util.c
imageio/imageio_util.h

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Utility functions used by the image decoders.

Files:

src/enc/picture_csp_enc.c

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WebPPicture utils for colorspace conversion

```
Author: Skal (pascal.massimino@gmail.com)

## Files:

examples/cwebp.c

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-----

simple command line calling the WebPEncode function.
Encodes a raw .YUV into WebP bitstream

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dec/io_dec.c

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functions for sample output.

Author: Skal (pascal.massimino@gmail.com)

## Files:

examples/dwebp.c

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Command-line tool for decoding a WebP image.

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/enc/backward_references_cost_enc.c

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-----
```

Improves a given set of backward references by analyzing its bit cost.
The algorithm is similar to the Zopfli compression algorithm but tailored to images.

Author: Vincent Rabaud (vrabaud@google.com)

Files:

src/enc/filter_enc.c

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Selecting filter level

Author: somnath@google.com (Somnath Banerjee)

Files:

src/enc/config_enc.c

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Coding tools configuration

Author: Skal (pascal.massimino@gmail.com)

Files:

imageio/webpdec.c
imageio/webpdec.h

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WebP decode.

Files:

src/dsp/lossless_neon.c

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NEON variant of methods for lossless decoder

Author: Skal (pascal.massimino@gmail.com)

Files:

sharpvuv/sharpyuv_gamma.c
sharpvuv/sharpyuv_gamma.h

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Gamma correction utilities.

Files:

src/dsp/dec_msa.c

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MSA version of dsp functions

Author(s): Prashant Patil (prashant.patil@imgtec.com)

Files:

imageio/tiffdec.c
imageio/tiffdec.h

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TIFF decode.

Files:

src/webp/decode.h

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Main decoding functions for WebP images.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dec/vp8_dec.h

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Low-level API for VP8 decoder

Author: Skal (pascal.massimino@gmail.com)

Files:

examples/gifdec.h

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GIF decode.

Files:

ltmain.sh

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Files:

src/dsp/lossless.h

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Image transforms and color space conversion methods for lossless decoder.

Authors: Vikas Arora (vikaas.arora@gmail.com)
Jyrki Alakuijala (jyrki@google.com)

Files:

src/dsp/mips_macro.h

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MIPS common macros

Files:

src/dsp/rescaler_neon.c

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NEON version of rescaling functions

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/msa_macro.h

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MSA common macros

Author(s): Prashant Patil (prashant.patil@imgtec.com)

Files:

src/dec/frame_dec.c

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Frame-reconstruction function. Memory allocation.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/yuv_mips32.c

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```
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-----
```

MIPS version of YUV to RGB upsampling functions.

Author(s): Djordje Pesut (djordje.pesut@imgtec.com)
Jovan Zelincevic (jovan.zelincevic@imgtec.com)

Files:

src/enc/iterator_enc.c

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```
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-----
```

VP8Iterator: block iterator

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/enc_msa.c

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```
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-----
```

MSA version of encoder dsp functions.

Author: Prashant Patil (prashant.patil@imgtec.com)

Files:

src/utils/bit_reader_utils.c

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```
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```

Boolean decoder non-inlined methods

Author: Skal (pascal.massimino@gmail.com)

Files:

examples/gif2webp.c

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simple tool to convert animated GIFs to WebP

Authors: Skal (pascal.massimino@gmail.com)
Urvang (urvang@google.com)

Files:

extras/webp_to_sdl.c
extras/webp_to_sdl.h

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Simple WebP-to-SDL wrapper. Useful for emscripten.

Author: James Zern (jzern@google.com)

Files:

src/enc/picture_psnr_enc.c

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WebPPicture tools for measuring distortion

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/enc_sse41.c

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SSE4 version of some encoding functions.

Author: Skal (pascal.massimino@gmail.com)

```

## Files:

src/dsp/yuv_neon.c

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YUV->RGB conversion functions

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/utils/utils.c

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Misc. common utility functions

Author: Skal (pascal.massimino@gmail.com)

## Files:

examples/anim_dump.c

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Decodes an animated WebP file and dumps the decoded frames as PNG or TIFF.

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/ssim.c

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-----

distortion calculation

Author: Skal (pascal.massimino@gmail.com)

```

```
## Files:
```

```
src/demux/demux.c
```

```
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```

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```

```
WebP container demux.
```

```
## Files:
```

```
src/dsp/filters_msa.c
```

```
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-----
```

```
MSA variant of alpha filters
```

```
Author: Prashant Patil (prashant.patil@imgtec.com)
```

```
## Files:
```

```
src/dec/vp8_dec.c
```

```
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-----
```

```
main entry for the decoder
```

```
Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:
```

```
src/enc/cost_enc.c
```

```
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-----
```

```
Cost tables for level and modes
```

```
Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:

imageio/pnmdec.c

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(limited) PNM decoder

## Files:

src/dec/buffer_dec.c

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Everything about WebPDecBuffer

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/rescaler_mips32.c
src/dsp/rescaler_mips_dsp_r2.c

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MIPS version of rescaling functions

Author(s): Djordje Pesut (djordje.pesut@imgtec.com)

## Files:

src/dsp/alpha_processing_sse2.c

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Utilities for processing transparent channel.

Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:

extras/vwebp_sdl.c

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-----

Simple SDL-based WebP file viewer.
Does not support animation, just static images.

Press 'q' to exit.

Author: James Zern (jzern@google.com)

## Files:

src/dsp/lossless_sse2.c

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SSE2 variant of methods for lossless decoder

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/webp/types.h

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Common types + memory wrappers

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/lossless_enc_msa.c

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```

MSA variant of Image transform methods for lossless encoder.

Authors: Prashant Patil (Prashant.Patil@imgtec.com)

Files:

src/webp/encode.h

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WebP encoder: main interface

Author: Skal (pascal.massimino@gmail.com)

Files:

imageio/image_enc.c

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Save image

Files:

examples/gifdec.c

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GIF decode.

Files:

src/mux/muxinternal.c

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Internal objects and utils for mux.

Authors: Urvang (urvang@google.com)

Vikas (vikasa@google.com)

Files:

examples/webpinfo.c

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Command-line tool to print out the chunk level structure of WebP files along with basic integrity checks.

Author: Hui Su (huisu@google.com)

Files:

src/dsp/common_sse41.h

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SSE4 code common to several files.

Author: Vincent Rabaud (vrabaud@google.com)

Files:

src/enc/analysis_enc.c

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Macroblock analysis

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/yuv_mips_dsp_r2.c

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MIPS DSPr2 version of YUV to RGB upsampling functions.

Author(s): Branimir Vasic (branimir.vasic@imgtec.com)
Djordje Pesut (djordje.pesut@imgtec.com)

Files:

src/enc/token_enc.c

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Paginated token buffer

A 'token' is a bit value associated with a probability, either fixed or a later-to-be-determined after statistics have been collected. For dynamic probability, we just record the slot id (idx) for the probability value in the final probability array (uint8_t* probas in VP8EmitTokens).

Author: Skal (pascal.massimino@gmail.com)

Files:

src/utils/quant_levels_utils.h

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Alpha plane quantization utility

Author: Vikas Arora (vikasa@google.com)

Files:

sharpvuv/sharpyuv_dsp.c
sharpvuv/sharpyuv_neon.c
sharpvuv/sharpyuv_sse2.c

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Speed-critical functions for Sharp YUV.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/upsampling.c

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YUV to RGB upsampling functions.

Author: somnath@google.com (Somnath Banerjee)

Files:

src/dec/idec_dec.c

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Incremental decoding

Author: somnath@google.com (Somnath Banerjee)

Files:

src/dsp/dec_mips32.c
src/dsp/dec_mips_dsp_r2.c

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MIPS version of dsp functions

Author(s): Djordje Pesut (djordje.pesut@imgtec.com)
Jovan Zelincevic (jovan.zelincevic@imgtec.com)

Files:

src/enc/picture_rescale_enc.c

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WebPPicture tools: copy, crop, rescaling and view.

Author: Skal (pascal.massimino@gmail.com)

Files:

```
examples/stopwatch.h
```

```
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```

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-----
```

```
Helper functions to measure elapsed time.
```

```
Author: Mikolaj Zalewski (mikolajz@google.com)
```

```
## Files:
```

```
src/enc/vp8li_enc.h
```

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-----
```

```
Lossless encoder: internal header.
```

```
Author: Vikas Arora (vikaas.arora@gmail.com)
```

```
## Files:
```

```
examples/webpmux.c
```

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-----
```

```
Simple command-line to create a WebP container file and to extract or strip
relevant data from the container file.
```

```
Authors: Vikas (vikaas.arora@gmail.com),
Urvang (urvang@google.com)
```

```
## Files:
```

```
src/dsp/cpu.c
```

```
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```

```
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-----
```

```
CPU detection
```

Author: Christian Duvivier (cduvivier@google.com)

Files:

src/dsp/common_sse2.h

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SSE2 code common to several files.

Author: Vincent Rabaud (vrabaud@google.com)

Files:

src/enc/quant_enc.c

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Quantization

Author: Skal (pascal.massimino@gmail.com)

Files:

extras/extras.c

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Additional WebP utilities.

Files:

src/utls/quant_levels_utils.c

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Quantize levels for specified number of quantization-levels ([2, 256]). Min and max values are preserved (usual 0 and 255 for alpha plane).

Author: Skal (pascal.massimino@gmail.com)

Files:

src/enc/cost_enc.h

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Cost tables for level and modes.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/enc/near_lossless_enc.c

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Near-lossless image preprocessing adjusts pixel values to help compressibility with a guarantee of maximum deviation between original and resulting pixel values.

Author: Jyrki Alakuijala (jyrki@google.com)

Converted to C by Aleksander Kramarz (akramarz@google.com)

Files:

src/utils/bit_reader_inl_utils.h

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Specific inlined methods for boolean decoder [VP8GetBit() ...]
This file should be included by the .c sources that actually need to call these methods.

Author: Skal (pascal.massimino@gmail.com)

Files:

examples/example_util.c

examples/example_util.h

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```

Utility functions used by the example programs.

Files:

src/utils/huffman_encode_utils.c

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Author: Jyrki Alakuijala (jyrki@google.com)

Entropy encoding (Huffman) for webp lossless.

Files:

src/dsp/upsampling_neon.c

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NEON version of YUV to RGB upsampling functions.

Author: mans@mansr.com (Mans Rullgard)

Based on SSE code by: somnath@google.com (Somnath Banerjee)

Files:

src/dsp/neon.h

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NEON common code.

Files:

src/dsp/dec_sse2.c

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SSE2 version of some decoding functions (idct, loop filtering).

Author: somnath@google.com (Somnath Banerjee)
cduvivial@google.com (Christian Duvivial)

Files:

src/utills/filters_utills.c

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filter estimation

Author: Urvang (urvang@google.com)

Files:

ltmain.sh

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Files:

src/dsp/lossless_enc_mips32.c

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MIPS version of lossless functions

Author(s): Djordje Pesut (djordje.pesut@imgtec.com)
Jovan Zelincevic (jovan.zelincevic@imgtec.com)

Files:

```
src/utils/random_utils.c
src/utils/random_utils.h
```

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Pseudo-random utilities

Author: Skal (pascal.massimino@gmail.com)

Files:

```
src/dsp/alpha_processing_neon.c
```

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Utilities for processing transparent channel, NEON version.

Author: Skal (pascal.massimino@gmail.com)

Files:

```
src/dsp/enc_mips32.c
```

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MIPS version of speed-critical encoding functions.

Author(s): Djordje Pesut (djordje.pesut@imgtec.com)
Jovan Zelincevic (jovan.zelincevic@imgtec.com)
Slobodan Prijic (slobodan.prijic@imgtec.com)

Files:

```
src/enc/vp8i_enc.h
```

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WebP encoder: internal header.

```
Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/filters_sse2.c

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SSE2 variant of alpha filters

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/lossless_enc_sse41.c

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SSE4.1 variant of methods for lossless encoder

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/enc/predictor_enc.c

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Image transform methods for lossless encoder.

Authors: Vikas Arora (vikaas.arora@gmail.com)
Jyrki Alakuijala (jyrki@google.com)
Urvang Joshi (urvang@google.com)
Vincent Rabaud (vrabaud@google.com)

## Files:

src/mux/muxread.c

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```

```
-----  
## Files:
```

```
extras/quality_estimate.c
```

```
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-----
```

```
VP8EstimateQuality(): rough encoding quality estimate
```

```
Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:
```

```
examples/anim_util.c
```

```
examples/anim_util.h
```

```
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-----
```

```
Utilities for animated images
```

```
## Files:
```

```
src/dsp/upsampling_msa.c
```

```
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-----
```

```
MSA version of YUV to RGB upsampling functions.
```

```
Author: Prashant Patil (prashant.patil@imgtec.com)
```

```
## Files:
```

```
src/dsp/lossless_enc_sse2.c
```

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-----
```

```
SSE2 variant of methods for lossless encoder
```

```
Author: Skal (pascal.massimino@gmail.com)

## Files:

swig/libwebp.swig

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-----

libwebp swig interface definition

Author: James Zern (jzern@google.com)

## Files:

src/utils/rescaler_utils.c
src/utils/rescaler_utils.h

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Rescaling functions

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/demux/anim_decode.c

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AnimDecoder implementation.

## Files:

src/enc/backward_references_enc.c
src/enc/backward_references_enc.h
src/enc/histogram_enc.c

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-----
```

Author: Jyrki Alakuijala (jyrki@google.com)

Files:

src/enc/tree_enc.c

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Coding of token probabilities, intra modes and segments.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/cost_neon.c

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ARM NEON version of cost functions

Files:

src/enc/picture_enc.c

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WebPPicture class basis

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dec/webp_dec.c

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Main decoding functions for WEBP images.

Author: Skal (pascal.massimino@gmail.com)

```

## Files:

src/dsp/lossless_enc.c

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Image transform methods for lossless encoder.

Authors: Vikas Arora (vikaas.arora@gmail.com)
Jyrki Alakuijala (jyrki@google.com)
Urvang Joshi (urvang@google.com)

## Files:

imageio/pngdec.c
imageio/pngdec.h

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PNG decode.

## Files:

src/dec/tree_dec.c

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-----

Coding trees and probas

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/lossless_sse41.c

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SSE41 variant of methods for lossless decoder

```

```

## Files:

src/dsp/enc_mips_dsp_r2.c

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MIPS version of speed-critical encoding functions.

Author(s): Darko Laus (darko.laus@imgtec.com)
Mirko Raus (mirko.raus@imgtec.com)

## Files:

ltmain.sh

func_version
-----

Echo version message to standard output and exit.
The version message is extracted from the calling file's header
comments, with leading '#' stripped:
1. First display the progname and version
2. Followed by the header comment line matching /^# Written by /
3. Then a blank line followed by the first following line matching
   /^# Copyright /
4. Immediately followed by any lines between the previous matches,
   except lines preceding the intervening completely blank line.
   For example, see the header comments of this file.

## Files:

sharpyuv/sharpyuv.h

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Sharp RGB to YUV conversion.

## Files:

src/dsp/yuv.c

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YUV->RGB conversion functions

```

```
Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/cpu.h

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CPU detection functions and macros.

Author: Skal (pascal.massimino@gmail.com)

## Files:

sharpvuv/sharpyuv.c

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Sharp RGB to YUV conversion.

Author: Skal (pascal.massimino@gmail.com)

## Files:

src/dsp/upsampling_sse2.c

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SSE2 version of YUV to RGB upsampling functions.

Author: somnath@google.com (Somnath Banerjee)

## Files:

src/utils/endian_inl_utils.h

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Endian related functions.
```

```
## Files:
```

```
examples/vwebp.c
```

```
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-----
```

```
Simple OpenGL-based WebP file viewer.
```

```
Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:
```

```
imageio/jpegdec.c  
imageio/jpegdec.h
```

```
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-----
```

```
JPEG decode.
```

```
## Files:
```

```
src/dsp/alpha_processing_sse41.c
```

```
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```

```
Utilities for processing transparent channel, SSE4.1 variant.
```

```
Author: Skal (pascal.massimino@gmail.com)
```

```
## Files:
```

```
src/enc/webp_enc.c
```

```
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```

```
WebP encoder: main entry point
```

```
Author: Skal (pascal.massimino@gmail.com)
```

Files:

imageio/metadata.c
imageio/metadata.h

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Metadata types and functions.

Files:

.cmake-format.py

If comment markup is enabled, don't reflow the first comment block in each listfile. Use this to preserve formatting of your copyright/license statements.

Files:

src/enc/frame_enc.c

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frame coding and analysis

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/dec_sse41.c

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SSE4 version of some decoding functions.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dec/alphai_dec.h

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Alpha decoder: internal header.

Author: Urvang (urvang@google.com)

Files:

src/dsp/alpha_processing.c

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Utilities for processing transparent channel.

Author: Skal (pascal.massimino@gmail.com)

Files:

src/mux/muxedit.c

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Set and delete APIs for mux.

Authors: Urvang (urvang@google.com)
Vikas (vikasa@google.com)

Files:

ltmain.sh

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Files:

examples/unicode.h

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Unicode support for Windows. The main idea is to maintain an array of Unicode arguments (wargv) and use it only for file paths. The regular argv is used for everything else.

Author: Yannis Guyon (yguyon@google.com)

Files:

src/dsp/enc_sse2.c

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SSE2 version of speed-critical encoding functions.

Author: Christian Duvivier (cduvivier@google.com)

Files:

src/dsp/rescaler.c

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Rescaling functions

Author: Skal (pascal.massimino@gmail.com)

Files:

src/dsp/lossless_enc_neon.c

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NEON variant of methods for lossless encoder

slf4j-api 2.0.16

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Jean-loup Gailly          Mark Adler
jloup@gzip.org            madler@alumni.caltech.edu

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*/
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Python Software Foundation license, version 2

A. HISTORY OF THE SOFTWARE

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Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <http://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

All Python releases are Open Source (see <http://www.opensource.org> for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above	2.1.1	2001-now	PSF	yes

Footnotes:

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- (2) According to Richard Stallman, 1.6.1 is not GPL-compatible, because its license has a choice of law clause. According to CNRI, however, Stallman's lawyer has told CNRI's lawyer that 1.6.1 is "not incompatible" with the GPL.

Thanks to the many outside volunteers who have worked under Guido's direction to make these releases possible.

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Version 3.1, 31 March 2009

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If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>
```

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Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

```
<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, your program's commands might be different; for a GUI interface, you would use an "about box".

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Version 3, 29 June 2007

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Version 3, 29 June 2007

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