

OpenDreamKit (ODK) Glossary



Anaconda	distribution of scientific softwares https://www.continuum.io/
API	Application Programming Interface: specifications of communication protocols between software components
 binder	web-application for Jupyter notebook visualization from a GitHub repository http://mybinder.org/
CAS	Computer Algebra System
Conda	package management system used in Anaconda https://conda.io/docs/
Cygwin	collection of tools which provide Linux functionalities on Windows https://www.cygwin.com
 cython	optimising static compiler from Python to C http://cython.org
 docker	software container platform (alternative to VM) https://www.docker.com
findstat	collaborative database for combinatorial statistics http://www.findstat.org/
flint	C library for number theory http://flintlib.org
 GAP	CAS for discrete computational algebra https://www.gap-system.org
 git	a version control system https://git-scm.com/
 GitHub	git based hosting service for software development https://github.com
GitLab	wiki and issue tracking system for software development projects (see also trac) https://about.gitlab.com/
HPC	High Performance Computing
IPython	command shell for interactive computing https://ipython.org
JOOMMF	Jupyter-OOMMF http://joommf.github.io
 jupyter	web-application for interactive computations http://jupyter.org/
 jupyterhub	configurable multi-user Jupyter server https://jupyterhub.readthedocs.io
 LinBox	exact linear algebra C++ library http://www.linalg.org
 LMFDB	L-functions and Modular Forms Database: collaborative knowledge and data-base for number theory http://www.lmfdb.org/
MathHub	portal for active mathematical documents and formalizations https://mathhub.info

MMT	Meta-Meta-Tool: data/knowledge/software management framework based on OM- Doc/MMT
MPIR	C library for multiprecision integer and rational arithmetic http://mpir.org
nbdime	notebook diffing and merging: Python library for version control for Jupyter notebooks https://github.com/jupyter/nbdime
nbval	Python library to test Jupyter notebooks https://github.com/computationalmodelling/nbval
 NumPy	Python library for N-dimensional arrays and linear algebra https://www.numpy.org
OEIS	The On-Line Encyclopedia of Integer Sequences https://oeis.org/
OMDoc/MMT	Open Mathematical Documents / Meta Meta Theories: representation format http://uniformal.github.io/doc/index.html
OOMMF	Object Oriented MicroMagnetic Framework http://math.nist.gov/oommf/
OpenMath	extensible standard for representing the semantics of mathematical objects http://openmath.org
OpenMP	Open Multi-Processing: API for parallel programming http://www.openmp.org
 PARI	C library for number theory and command line interface https://pari.math.u-bordeaux.fr
 python	programming language and interpreter https://www.python.org
Pythran	Python to C++ compiler for a subset of the Python language https://pythonhosted.org/pythran
 sage	CAS which aggregates dozens of other softwares and libraries such as FLINT, GAP, LinBox, MPIR, PARI/GP, Singular http://www.sagemath.org
 Sphinx	software to create documentation http://www.sphinx-doc.org/en/stable/
SMC	SageMathCloud: web-application and website for collaborative work around SageMath, Jupyter, LaTeX, ... https://cloud.sagemath.com
 SciPy	Python libraries for mathematics, science, and engineering https://scipy.org
SCSCP	Symbolic Computation Software Composability Protocol
SIMD	Single Instruction Multiple Data (in-core parallelism)
 SINGULAR	CAS for commutative algebra and algebraic geometry https://www.singular.uni-kl.de
SGE	Son of Grid Engine and derivatives: distributed resource manager and batch job sched- uler for HPC clusters https://arc.liv.ac.uk/trac/SGE
 trac	wiki and issue tracking system for software development projects (see also GitLab) https://trac.edgewall.org/
VM	Virtual Machine: software that emulates a computer in an operating system
VRE	Virtual Research Environment