python™



Py4Science @UND IP[y]:



an ETS proiec



3rd SciPy Conference September 2 - 3, 2004 (Jim Huginin, Reynote) na 24.2000

All-in-One



Python for Scientists

Enthought Python Distribution





Open-source Mathematics Software



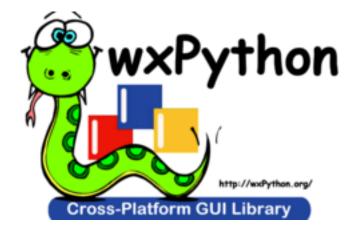
- Free and open-source
- Object-oriented
- Batteries included
- Dynamic data-types
- Google, NASA, NCAR, NOAA uses
- "Every pixel counts"



- What is Python? by Wesley Chun
- Python 101 and 102 @ PyCon 2009
- An Introduction to OO Programming PyCon 2009
- Python 401: Some Advanced Topics @ PyCon
 2009
- Learning Python... with Videos (ShowMeDo.com)

IP[y]:

- Enhanced interactive Python shell
- Numbered inputs / outputs
- Dynamic object introspection
- TAB completion
- System shell interaction
- Hides complexity
- Pydee...







NumPy:

Multidimensional arrays in Python Lots of functions to operate on arrays Core of Py4Science

SciPy:

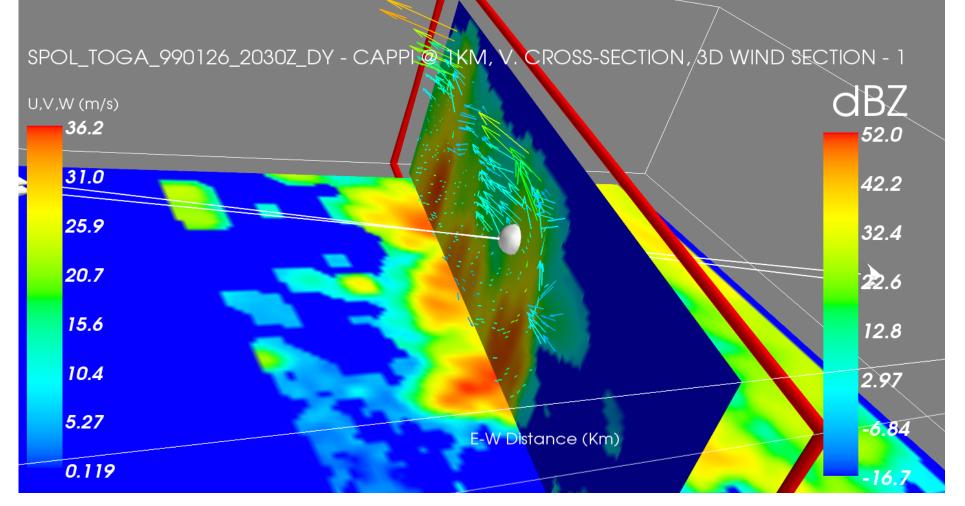
Library of scientific and eng functions
Signal processing, statistics...
Home for Py4Science



- 2D Visualization interface for Python
- Publication-quality plots
- Embeddable equations
- Large amounts of example code
- On-going 3D plotting functionality
- Great community support

- An aesthetic view to 3D
- Via scripting and GUI





Resources 2

- <u>Scientific Computing with Python</u> 2004
- Python for Scientists Workshop 2008
- <u>A Demonstration of the 'IPython' Interactive Shell</u>
- Matplotlib by John D. Hunter
- Scientific Computing in Python by Enthought

What's more?

- Scripting for Open Office, GIMP
- <u>SymPy</u>
- C/C++, Fortran code wrapping
- Parallel processing
- <u>PyCUDA</u>
- NetCDF3-4, HDF4-5 accessibility

Lottery Time

import random

random.choice(lucky.keys())



New to Python? This is the definitive guide to Python development for experienced programmers

Covers core language features thoroughly, including those found in the latest Python releases — learn *more* than just the syntax!

.

Learn advanced topics such as regular expressions, networking, multithreading, GUI, Web/CGI, and Python extensions

. .

Includes brand-new chapters on database, Internet client, Java/Jython, and Microsoft Office

.

Presents hundreds of code snippets, interactive examples, and practical exercises to strengthen your Python skills

WESLEY J. CHUN