

# The Scientific Python Ecosystem

# Core Packages

- NumPy - the fundamental package for numerical computation
- SciPy Library - a collection of numerical algorithms and domain-specific toolboxes
- Matplotlib – plotting and visualization package, 2D plotting and basic 3D plotting

# Core Packages

- SymPy - for symbolic mathematics and computer algebra
- Pandas – easy to use data structures for data science
- IPython – Interactive shell and web based notebook for rapid prototyping of ideas

# Additional Packages:

not the part of the core packages, yet very important

- Scikit-image – Image processing library
- Scikit-learn – machine learning and AI library

# Additional Packages:

- Jupyter – Interactive web based notebook with code, visualizations, rich text, videos, and more
- h5py and PyTables – both access data stored in HDF5 format
- nose and pytest – unit testing frameworks for python (nose is being phased out in preference for pytest)

# Thank You

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