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Python Data Science Handbook

For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the *Python Data Science Handbook* do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools.

Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python.

With this handbook, you'll learn how to use:

- **IPython and Jupyter: provide computational environments for data scientists using Python**
- **NumPy: includes the *ndarray* for efficient storage and manipulation of dense data arrays in Python**
- **Pandas: features the *DataFrame* for efficient storage and manipulation of labeled/columnar data in Python**
- **Matplotlib: includes capabilities for a flexible range of data visualizations in Python**
- **Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms**

"If you want to learn data science with Python, this book is a fantastic starting point. I've used it with great success to teach computer science and statistics majors. Jake goes far beyond the basics of open source tools; he also explains the underlying concepts, patterns, and abstractions of data science using clear language and approachable explanations."

—Brian Granger
Associate Professor of Physics, Cal Poly; cofounder of Project Jupyter

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