NumPy Cookbook - Second Edition
**Synopsis**

Over 90 fascinating recipes to learn and perform mathematical, scientific, and engineering Python computations with NumPy

About This Book

Perform high-performance calculations with clean and efficient NumPy code

Simplify large data sets by analysing them with statistical functions

A solution-based guide packed with engaging recipes to execute complex linear algebra and mathematical computations

Who This Book Is For

If you are a Python developer with some experience of working on scientific, mathematical, and statistical applications and want to gain an expert understanding of NumPy programming in relation to science, math, and finance using practical recipes, then this book is for you.

What You Will Learn

- Learn advanced indexing and linear algebra
- Deal with missing stock price data using masked arrays
- Explore everything you need to know about image processing
- Dive into broadcasting and histograms
- Profile NumPy code and visualize the results
- Speed up your code with Cython
- Use universal functions and interoperability features
- Analyze your performance using Quality Assurance
- Learn about exploratory and predictive data analysis with NumPy

In Detail

NumPy has the ability to give you speed and high productivity. High performance calculations can be done easily with clean and efficient code, and it allows you to execute complex algebraic and mathematical computations in no time.

This book will give you a solid foundation in NumPy arrays and universal functions. Starting with the installation and configuration of IPython, you'll learn about advanced indexing and array concepts along with commonly used yet effective functions. You will then cover practical concepts such as image processing, special arrays, and universal functions. You will also learn about plotting with Matplotlib and the related SciPy project with the help of examples. At the end of the book, you will study how to explore atmospheric pressure and its related techniques. By the time you finish this book, you'll be able to write clean and fast code with NumPy.

**Book Information**

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Average Customer Review:  3.8 out of 5 stars Â See all reviews Â (4 customer reviews)
When it comes to software, I learn best from evaluating examples, and then modifying those examples to fit my needs. The cookbook type format is great for that, and the NumPy book here is no exception. This book doesn’t just give math related examples of what numpy can do, but it uses a number of other libraries, such as scipy, matplotlib, pillow to highlight numpy related features. There is even a section with exchanging data with MATLAB/Octave as well as R. A lot of examples involve image and audio processing which is a good illustration of numpy’s capabilities. The part that I really enjoy is that there is a chapter dedicated to profiling and debugging, where it is explained how to evaluate how fast/efficient your code is written, and gives instructions to how to properly debug with ipython, which is something I haven’t seen much of elsewhere. I only discussed a small number of chapters, but this book does a decent job covering numpy’s capabilities, but it does an excellent job highlighting its interaction with other libraries, as well as best practices with profiling and testing.

Awesome book, with tons of useful information. I bought this book to help me with my stock analysis program. However, The plethora of information in this book on processing images, audio, and statistics have helped me with many other projects, including analyzing network traffic (Chapter 9 is a great help to enable fast processing with python). Being a secure development TDD guy, chapters 7 & 8 sealed the deal for me.

The book is just an introduction in Numpy. In the second edition two chapters are added; Latest and Greatest in Numpy and Exploratory and Predictive Data Analysis with NumPy Unfortunately the code for the examples cannot be downloaded from the Packt webpage, so the examples cannot be executed. The book describes the installation of IPython, matplotlib but the installation of Numpy is not described. Nevertheless the book also contains some useful examples.

This book has a lot of information in it and may be a great book if was titled "random python recipes". I was looking for a book on NumPy and while Bumpy is used throughout the book there is no focus. I would not recommend this book.
NumPy Cookbook - Second Edition Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython Crock Pot: Everyday Crock Pot and Slow Cooker Recipes for Beginners(Slow Cooker, Slow Cooker Cookbook, Slow Cooker, Slow Cooker Cookbook, Crockpot Cookbook, ... Low Carb ) (Cookbook delicious recipes 1) Island Style Cookbook: Guam’s Favorite Soups, Tasty Guam Recipes, Wonderful Chamorro Island Food , Exotic Guam Cookbook Of Soups, Enjoy Awesome Chamorro Guam Food From This Island Cookbook Easy Vietnamese Cookbook: 50 Authentic Vietnamese Recipes (Vietnamese Recipes, Vietnamese Cookbook, Vietnamese Cooking, Easy Vietnamese Cookbook, Easy Vietnamese Recipes, Vietnamese Food Book 1) Chinese Cooking: No Wok Takeout! 80 Amazingly Delicious 3 Steps Or Less Chinese Recipes Revealed (Chinese Cookbook, Cooking For One) (cooking for beginners, ... meals cookbook, easy meals for one 2) Crockpot Recipes: 30 Delicious, Dairy & Gluten Free, Low Carb Recipes For Busy People (Slow Cooker, Slow Cooker Cookbook, Crockpot Cookbook, Gluten Free ... Cooker Recipes, Low Carb Cookbook Book 1) Easy Tomato Sauce Cookbook: 50 Delicious Tomato Sauce Recipes (Tomato Sauce, Tomato Sauce Cookbook, Tomato Sauce Recipes, Italian Cookbook, Italian Recipes Book 1) Salads - Top 200 Salad Recipes Cookbook (Salads, Salads Recipes, Salads to go, Salad Cookbook, Salads Recipes Cookbook, Salads for Weight Loss, Salad Dressing Recipes, Salad Dressing, Fruit Salad) Rice Cooker Recipes: The Ultimate Rice Cooker Cookbook: The Best Quick And Easy Rice Cooker Recipes You Can Make At Home Tonight (Rice Cooker Cookbook, ... Recipes, Rice Cookbook, Rice Recipes) CROCK POT: 450 Easy Crockpot Recipes (crockpot cookbook, slow cooker recipes, crock pot meals, paleo, vegetarian, crock pot, crock pot cookbook, crockpot freezer meals, slow cooker cookbook) TEX-MEX COOKBOOK Tex-Mex Takeout Cookbook: Favorite Tex-Mex Recipes to Make at Home (Texas Mexican Cookbook) Easy Irish Cookbook (Irish Cookbook, Irish Recipes, Irish Cooking, Scottish Recipes, Scottish Cooking, Scottish Cookbook 1) Easy Portuguese Cookbook: 50 Authentic Portuguese and Brazilian Recipes (Portuguese Cookbook, Portuguese Recipes, Portuguese Cooking, Brazilian Cookbook, Brazilian Recipes, Brazilian Cooking Book 1) Easy Quesadilla Cookbook (Quesadillas Cookbook, Quesadillas Recipes, Quesadilla Cookbook, Quesadilla Recipes, Quesadillas 1) Easy Hawaiian Cookbook: Authentic Tropical Cooking (Hawaiian Cookbook, Hawaiian Recipes, Hawaiian Cooking, Tropical Cooking, Tropical Recipes, Tropical Cookbook Book 1) Atkins Diet: Dr Atkins New Diet Revolution - 6 Week Low Carb Diet Plan for You (Atkins Diet Book, Low Carb Cookbook, Atkins Diet Cookbook, High Protein Cookbook, New Atkins Diet) Low Carb High Fat Cookbook: Bacon, Butter & Coconut Oil-101 Healthy & Delicious Low Carb, High Fat Recipes Perfect For the Paleo Diet, Atkins