

1. Record Nr.	UNINA9910797389303321
Autore	Idris Ivan
Titolo	NumPy beginner's guide : build efficient, high-speed programs using the high-performance NumPy mathematical library // Ivan Idris
Pubbl/distr/stampa	Birmingham, England : , : Packt Publishing, , 2015 ©2015
ISBN	1-78528-883-0
Edizione	[3rd ed.]
Descrizione fisica	1 online resource (348 p.)
Collana	Learn by doing : less theory, more results
Disciplina	005.13 005.133
Soggetti	Mathematics - Data processing Python (Computer program language) Mathematical analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Cover; Copyright; Credits; About the Author; About the Reviewers; www.PacktPub.com; Table of Contents; Preface; Chapter 1: NumPy Quick Start; Python; Time for action - installing Python on different operating systems; The Python help system; Time for action - using the Python help system; Basic arithmetic and variable assignment; Time for action - using Python as a calculator; Time for action - assigning values to variables; The print() function; Time for action - printing with the print() function; Code comments; Time for action - commenting code; The if statement Time for action - deciding with the if statementThe for loop; Time for action - repeating instructions with loops; Python functions; Time for action - defining functions; Python modules; Time for action - importing modules; NumPy on Windows; Time for action - installing NumPy, matplotlib, SciPy, and IPython on Windows; NumPy on Linux; Time for action - installing NumPy, matplotlib, SciPy, and IPython on Linux; NumPy on Mac OS X; Time for action - installing NumPy, SciPy, matplotlib, and IPython with MacPorts or Fink; Building from source; Arrays; Time for action - adding vectors IPython - an interactive shellOnline resources and help; Summary;

Chapter 2: Beginning with NumPy Fundamentals; NumPy array object; Time for action - creating a multidimensional array; Selecting elements; NumPy numerical types; Data type objects; Character codes; The dtype constructors; The dtype attributes; Time for action - creating a record data type; One-dimensional slicing and indexing; Time for action - slicing and indexing multidimensional arrays; Time for action - manipulating array shapes; Time for action - stacking arrays; Time for action - splitting arrays

Time for action - converting arraysSummary; Chapter 3: Getting Familiar with Commonly Used Functions; File I/O; Time for action - reading and writing files; Comma Separated Values files; Time for action - loading from CSV files; Volume Weighted Average Price; Time for action - calculating volume weighted average price; The mean() function; Time-weighted average price; Value range; Time for action - finding highest and lowest values; Statistics; Time for action - doing simple statistics; Stock returns; Time for action - analyzing stock returns; Dates; Time for action - dealing with dates

Time for action - using the datetime64 data typeWeekly summary; Time for action - summarizing data; Average True Range; Time for action - calculating the average true range; Simple Moving Average; Time for action - computing the simple moving average; Exponential Moving Average; Time for action - calculating the exponential moving average; Bollinger Bands; Time for action - enveloping with Bollinger bands; Linear model; Time for action - predicting price with a linear model; Trend lines; Time for action - drawing trend lines; Methods of ndarray

Time for action - clipping and compressing arrays

Sommario/riassunto

This book is for the scientists, engineers, programmers, or analysts looking for a high-quality, open source mathematical library. Knowledge of Python is assumed. Also, some affinity, or at least interest, in mathematics and statistics is required. However, I have provided brief explanations and pointers to learning resources.
