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Titolo	Beginning Python Visualization [[electronic resource]] : Crafting Visual Transformation Scripts // by Shai Vaingast
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Collana	The expert's voice in Python
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Soggetti	Python (Computer program language) Software engineering Python Software Engineering/Programming and Operating Systems
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	<p> ""Contents at a Glance""; ""Contents""; ""About the Author""; ""About the Technical Reviewer""; ""Acknowledgments""; ""Introduction""; ""Chapter 1: Navigating the World of Data Visualization""; ""Gathering Data""; ""Case Study: GPS Data""; ""Scanning Serial Ports""; ""Recording GPS Data""; ""Data Organization""; ""File Format""; ""File Naming Conventions""; ""Data Location""; ""Data Analysis""; ""Walking Directories""; ""Reading CSV Files""; ""Analyzing GPS Data""; ""Extracting GPS Data""; ""Data Visualization""; ""GPS Location Plot""; ""Annotating the Graph""; ""Velocity Plot""; ""Subplots"" ""Text""""Tying It All Together""; ""Final Notes and References""; ""Chapter 2: The Environment""; ""Tools of the Trade""; ""Operating Systems""; ""GNU/Linux""; ""Windows""; ""Stand-Alone (Natively)""; ""Cygwin""; ""Virtual Machines""; ""Choosing an Operating System""; ""Then Again, Why Choose? Using Several Operating Systems""; ""The Python Environment""; ""Versions""; ""Python""; ""Python Distributions with Scientific Packages""; ""Python Integrated Development Environments""; ""IDLE""; ""IPython""; ""IPython Notebook""; ""Spyder""; ""Scientific Computing""; ""NumPy""; ""SciPy"" ""Matplotlib""""Image Processing""; ""PySerial""; ""Manually Installing a </p>

Python Package"; "Installation Summary"; "Additional Applications";
"Editors"; "Selecting the Proper Editor for You"; "A Short List of Text
Editors"; "Spreadsheets"; "Word Processors"; "Image Viewers";
"Version-Control Systems"; "Example: Directory Structure for the
Book"; "Licensing"; "Final Notes and References"; "Chapter 3:
Python for Programmers"; "The Building Blocks"; "What Is Python?";
"Interactive Python"; "Invoking Python"; "Entering Commands";
"The Result Variable"
"The Interactive Help System""Moving Around"; "Running Scripts";
"Data Types"; "Numbers"; "Integers"; "Other Useful Bases";
"Comparisons"; "Bitwise Operations"; "Augmented Assignments";
"Float and Complex"; "Strings"; "Expressing Strings"; "String
Operations"; "Booleans"; "Logical Operations"; "Data Structures";
"Lists"; "Tuples"; "Dictionaries"; "Sets"; "Variables";
"Statements"; "Printing"; "Suppressing Line Breaks"; "Format
Specifications"; "User Input"; "Comments"; "Flow Control"; "if, elif,
else"; "The pass Statement"
"Exceptions: try, else, and finally""Iterators"; "The for Statement";
"List Comprehensions"; "The while Statement"; "Statements break
and continue"; "Some Built-in Functions"; "Defining Functions";
"Generators"; "Generator Expressions"; "Object-Oriented
Programming"; "Modules and Packages"; "The import Statement";
"Modules Installed in a System"; "The dir Statement"; "Final Notes
and References"; "Chapter 4: Data Organization"; "Organizing
Chaos"; "File Name Conventions"; "Date and Time in a File Name";
"Useful File Name Titles"
"File Name Extensions"

Sommario/riassunto

We are visual animals. But before we can see the world in its true splendor, our brains, just like our computers, have to sort and organize raw data, and then transform that data to produce new images of the world. Beginning Python Visualization: Crafting Visual Transformation Scripts, Second Edition discusses turning many types of data sources, big and small, into useful visual data. And, you will learn Python as part of the bargain. In this second edition you'll learn about Spyder, which is a Python IDE with MATLAB®-like features. Here and throughout the book, you'll get detailed exposure to the growing IPython project for interactive visualization. In addition, you'll learn about the changes in NumPy and Scipy that have occurred since the first edition. Along the way, you'll get many pointers and a few visual examples. As part of this update, you'll learn about matplotlib in detail; this includes creating 3D graphs and using the basemap package that allows you to render geographical maps. Finally, you'll learn about image processing, annotating, and filtering, as well as how to make movies using Python. This includes learning how to edit/open video files and how to create your own movie, all with Python scripts. Today's big data and computational scientists, financial analysts/engineers and web developers – like you - will find this updated book very relevant.
