**Key Features**

* Get both programmers and non-programmers comfortable in using pandas and Python as a data exploration and analysis tool
* Step-by-step instruction of using pandas with incremental examples to facilitate learning
* Use of pandas of a data analysis tool and not on learning to program using python
* Exploration of pandas through a framework / process of data science, with explanation of how pandas is well suited for various stages in a data analysis process

**Book Description**

This learner's guide will guide you through a comprehensive set of features provided by the pandas library and teach you how to use pandas to perform data manipulation and analysis, and to understand how it supports these within a framework of the data sciences, complete from representing single and multivariate data, cleansing of data, grouping and aggregation, slicing and dicing, loading data from external sources, and visualizing and discovering insights previously hidden from view.

You will start with an overview of the data science process to set a framework of understanding the features of pandas as they are explored throughout the book. You will then go on an adventure of learning to represent uni and multivariate data with the pandas Series and DataFrame, and then learn how to populate and manipulate those structures manipulating it in various means in support of the data science process. In the end we will get briefly into how to use pandas to model and understand simple problems in Finance.

With the knowledge you gain from this book, you will be able to quickly be able to learn pandas and how it can facilitate you in the exciting world of data science and analysis.

**What You Will Learn**

* How data scientists think about of the processes of gathering and understanding data
* How pandas can be used to support the end to end process of data analysis
* Using the pandas Series and DataFrame objects to represent single and multivariate data
* How to use pandas to slice and dice data, as well as combine, group and aggregate data from multiple sources
* Accessing data from external sources such as files, databases and web services
* How to represent and manipulate data that changes over time and many of the intricacies involved with this type of data
* Combining, aggregating and summarizing of data
* Using data visualization to see meaning in the underlying data
* How to use pandas to solve several common data representation and analysis problems within finance.

**About the Author**

**Michael Heydt** is a technologist, scientist, entrepreneur, educator and trainer with decades of professional software development and financial and commodities trading experience. He has worked extensively on Wall Street specializing in development of distributed, actor-based, high-performance, high-availability trading systems. He is currently founder of Micro Trading Services, a cloud services company focusing on cloud based micro-service based software solutions for finance and commodities trading, and also a principal / co-founder of Algoists.com, a research think-tank focusing creating the future of cloud based automated and algorithmic trading services.