

# Preface

It is our firm belief that an ambitious student major in finance should learn at least one computer language. The basic reason is that we have entered the Big Data era. In finance, we have a huge amount of data, and most of it is publically available free of charge. To use such rich sources of data efficiently, we need a tool. Among many potential candidates, Python is one of the best choices.

## Why Python?

There are various reasons that Python should be used. Firstly, Python is free in terms of license. Python is available for all major operating systems, such as Windows, Linux/Unix, OS/2, Mac, and Amiga, among others. Being free has many benefits. When students graduate, they could apply what they have learned wherever they go. This is true for the financial community as well. In contrast, this is not true for SAS and MATLAB. Secondly, Python is powerful, flexible, and easy to learn. It is capable of solving almost all our financial and economic estimations. Thirdly, we could apply Python to Big Data. Dasgupta (2013) argues that R and Python are two of the most popular open source programming languages for data analysis. Fourthly, there are many useful modules in Python. Each model is developed for a special purpose. In this book, we focus on NumPy, SciPy, Matplotlib, Statsmodels, and Pandas modules.