A Brief Introduction to Python
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Today's Agenda

- About me
- Why Python?
- So what exactly is Python?
- How can we interact with Python?
- Features
- Continue rest of the session working with the Jupyter Notebook file (shared on the LMS)

About Me

- Head - Research & Content, QuantInsti
- 10+ years of experience in industry & academia across India, Singapore and Canada
  - Manager - ICICI Bank, Singapore & Mumbai
  - Assistant Professor (Finance) - Symbiosis Institute of Business Management, Pune
  - Research Scholar - McMaster University, Canada
- Co-author of two books
  - Python Basics: With Illustrations from the Financial Markets (2019)
  - A rough and ready guide to Algorithmic Trading (2020)
- Education
  - BE - Electronics & Telecom Engineering, VESIT (Mumbai University)
  - MBA - NTU Singapore

Why Python?

- General purpose programming language

- It's open source, so it's free

- One of the easiest to read and learn

- It is the language of quant trading/finance

So what exactly is Python?

- Like any other software application on our computer

- Since it's a programming language, it has a specific way of working:

  - Take the text that we write (we call this 'code')

  - Convert it into machine-readable instructions

  - Run them (to hopefully produce what we asked it to)

- To be more precise: When we say Python, we actually refer to the Python interpreter or kernel.

How can we interact with Python?

- By directly typing 'python' on our console. This is the textual or a command-line interface.
- Using text editors; Ex. Atom, Notepad++, SublimeText, Emacs, etc.
- Distributions like the Anaconda distribution **(which we recommend)**
    - Spyder IDE (Standard GUI that is similar to ones we see when working with languages like MATLAB, R, C++, etc.
    - **Jupyter Notebook/ Jupyter Lab** - A browser based interface which allows you to interleave code, output, explanations in a single file

Features

- Relatively small core language
- In common use, augmented with many high quality libraries (mostly from third parties)
- We import them depending on the actions/tasks we need to perform.
- A standard feature of Python programs is it begins with a series of "import" statements
- These libraries are also called modules or packages. You'll find these words used interchangeably. So get used to it.

```python
import pandas as pd
import numpy as np
import datetime
import matplotlib.pyplot as plt
import pandas_datareader.data as web
import os
```