St Andrews' Investment Society Technology

September 28, 2023

1 Introduction

Firstly, thank you for coming along to get involved with technology in the society. We hope to share a bit of what we know in the hopes to spur you into learning about all the possible roles of technology in Finance. Throughout the year we will be using Python, as this is a high level language, making it easier to learn than others, and one which is used very commonly in the industry.

The resources we offer are not lecture notes which must be learnt in order to remain part of the society, nor are they a list of tasks to be completed to increase your chances of employment. They are simply a collection of examples illustrating the use of technology in the world of finance, and how these may help you. They are here to act as base camp.

The technology sector, as you may know, is a recent addition to the society; as such we have an element of free rein with regards to the direction in which we want to take it. Currently, our plans for semester 1 are to collectively bring everyone involved to a high level of coding ability with Python. This is with the aim by the end of the semester everyone will complete a mini project of creating a simple prediction model and summary report, mimicking some of the common tasks associated with technologists in finance. Then carrying on into the second semester, building on the basics learnt, develop a more advanced model with data from a society sponsor with prizes up for grabs at the end of the year.

2 Getting started

2.1 What you will need

You will need the following:

1. A GitHub account and git installed.
2. Python v3.9+ installed.
3. Miniconda (preferable) or pip. **(SQA only)**

Tutorials for installing and setting up Git are included below. For Python view Install Python. If you are new to using the command line, see command line cheat sheet.

2.2 Installing Git

To help speed up the process of learning we have created a online repository(repo) on GitHub which contains all the examples we will use. To download git refer to installation guide. Once installed you can download the git repo from here. Note you will need to be added to the access for the repo before you can download this. For setting up the repo on your computer follow steps in the **git and github.pdf file**. Make sure you have the repo in an easily found location, to make your life easier later on.

2.3 Installing Miniconda

Miniconda is a package managing software used to install and manage various packages. If you have ever used 'pip' this is basically the same thing with a few extra features. We will use miniconda to setup our environment. To install miniconda refer to Miniconda installation. Once you have installed miniconda, in a terminal navigate to the **environment.yml** file in repo you've just downloaded and run **conda env create -f environment.yml**. This may take a while to install all the packages. When this is finished run **conda activate invest_soc**, this will activate the environment for use, we are almost there!

2.4 Running Jupyter Notebooks

This is the easiest step of setup. If you have installed the conda environment, in a terminal simply run **conda activate invest_soc**, this activates the environment (note this can be done from anywhere). If you are not using conda you may need to install Jupyter Notebooks to run the next command. Navigate to the repo folder and type **jupyter notebook** inside of the repo, this will start a webpage with the notebooks from the repo available for use. That's it, we're all setup and ready to go. The repo contains all our educational content and will be updated with new material regularly throughout the semester.