The software will be deployed to calculate average **PE Ratio**\[1\] and **other relevant measures** of a market index of choice (e.g. S&P500 [2]) and then compare it with **PE and other ratios** of each **individual stock** listed in the chosen market index composition.

As starting point, by developing an **alpha version** of the software, the goal will be to select those stocks with relevant mispricing and whose **ratios** are undervalued relative to the current **market benchmark**.

**General purpose** of the software version will be to propose an efficient and automatic **portfolio selection (descriptive model)**, assuring to the user (client) measurable active return against the index, so called **α** [3].

Later features, eventually added by developing **beta version**, will be the capability of the software to automatically build a **portfolio of stocks** and measure his performance against **historical events (diagnostic model – back test data)** and able to elaborate **future trends prediction (predictive-prescriptive model)**.

An efficient **automated financial advisor**, with given performance, that will be measurable against the current market index, according to **CAPM** [4]

In conclusion, we foresee the possibility to give some practical **day-trading** and **long-term signals**, by designing an **automatic update** of recent market data, and we are confident of the usability and application of the concept on **broader and different datasets**, once tested.

We will commit these two months to develop it and possibly improve it further also after this period, in order to make it a useful and reliable system for **personal use**.
Reference:


Python Modules:

• pandas, numpy, matplotlib, sklearn – for data processing, visualization and machine learning
• tkinter, easygui – for graphical user interfaces
• wit.ai – for speech recognition
• face_recognition – for facial recognition
• Python-sounddevice – for sound recording
• OpenCV – for image processing
• pygame – for creating games