### **Business Understanding**

There are a vast array of methodologies to trade financial instruments, it’s a very competitive environment where people use their own expertise to produce profits above what you would get if you were to just invest in an index fund. There are people who use fundamental analysis that consists of making sense of the financial information such as interest rates, retail sales, GDP, etc. to find out where price is heading. Then there is technical analysis that makes use of behavior of the price of the instrument being traded currently and its historical price over different timeframes. Example of timeframes: 1 week , 1 day, 4 hour, 1 hour, 30 minutes, 15 minutes, 5 minutes, 1 minute and the smallest would be by the ‘tick’ or ‘point’.

For Sterling Pound vs US Dollar GBPUSD, an indicator such as pivots are used extensively along with additional indicators such as Bollinger bands, Moving Averages, RSI and Stochastics.

I would like to combine these indicators along a form of Fibonacci Analysis that produced key price points based on the high and low points in a particular timeframe.

Using Fibonacci levels for directional bias, entry and exit levels. and then applying a model to the other features such as the indicators mentioned above to provide the confirmation of entry

### **Data Understanding**

Tick data can be loaded and transformed and analyzed by Pandas Time Series. This data is provided by a broker – Darwinex.

### **Data Preparation**

If there is missing data or incorrect data, cleaning may be required to appropriately fill the gaps.

### **Modeling**

Time Series in SARIMA model to predict where price will go.

### **Evaluation**

A sharp-ratio of greater than 1.0. A risk to reward ratio of 1 to 1 as a minimum and success rate of over 50% winrate.

<https://www.investopedia.com/ask/answers/010815/what-good-sharpe-ratio.asp>

### **Deployment**

Deploy a working algorithm connected to Darwinex using a cloud based solution such as a **Virtual Private Server (VPS).**