

Project 2- Group 5

Project title – Machine Learning Robo Advisor

Team – Blandine, Omar, Pankaj, Michael

Project description/outline – Developing a ML Robo Advisor which can advise on stock portfolios based on risk appetite of investors. We analysed a combination of stocks, Cryptos and bonds in a Portfolio and categorize them as high risk, Medium risk and low risk Portfolios. The returns on the portfolios will be predicted by using scikit Machine learning algorithm. The Robo advisor would also consider Sentiment of the overall market before recommending the portfolios.

Steps:

1. Develop three different portfolios and predict the returns using scikit Machine learning algorithm.
2. Define an Amazon Lex bot with a single/multiple intent that establishes a conversation about the requirements to suggest an investment portfolio based on Risk appetite.
3. Build and test the Robo advisor for accuracy.
4. Using the Amazon Lambda function validates user inputs and returns the optimal investment portfolio.

Data sets to be used - We will use Stocks, bonds and Crypto data from Yahoo Finance, Google Finance and Alpaca API. We will be using 3 years of historical data from 2019 to 2021.

Rough breakdown of tasks –

1. Omar – Data Exploration and downloads, Coding, Presentation
2. Pankaj – Data Integration, Coding, Presentation
3. Blandine– Data Exploration and downloads, Coding, Presentation
4. Michael – Data Integration, Coding, Presentation