

POUYA FARIVAR

+98 9145350899 ✉ pouyam.fr@gmail.com [in linkedin.com/in/pouya-farivar](https://www.linkedin.com/in/pouya-farivar) github.com/PouyaFarivar

Education

Sharif University of Technology

Bachelor of Science in Electrical Engineering, GPA: 17.19/20

September 2020 – Now

Tehran, Iran

National Organization for Development of Exceptional Talents (Sampad)

High School, Preparing for IMC(International Mathematics competition) 2018, GPA: 19.89/20

June 2017 – June 2020

Ardebil, Iran

Experience

University of Oslo

Research Assistant

Jul 2023 – Sep 2023

Oslo, Norway

- Developed Classification models for brain EEG time series data recorded from epilepsy patients on memory tasks, reaching upwards of 80% accuracy on stimuli prediction which is revolutionary in the field.
- Preprocessing and feature-selection was done using Fourier transforms to extract the useful frequency ranges of the temporal data. Further self-made steps were performed to decrease the noisiness and randomness of data. Classification was done using custom made, noise resistant, Support Vector models to classify the brain response to new, old and consolidated stimuli.
- Ongoing Publication: Expected Preprint in November.

SEGAL Automotive Parts

Senior Forecast Analyst

Jul 2022 – Jul 2023

Dubai, UAE

- Forecasted the demand for 1600 Auto parts worldwide using the sales data generated by the accounting team, reaching an accuracy of 85% for the coming year and decreasing the inventory management costs by 30% which resulted in a 10% increase in net profits for the company.
- Worked with a team of 5 in order to turn sales data into useful forecasting data. The forecasting was done using ETS(Error, Trend, Seasonal) for predicting the seasonality part of the data and a Exponential Smoothing method was used to find the trend of the sales data. The results of the forecasts were used to create inventory management policies for the coming year with the help of the inventory management team.

Projects

Forecasting 24h Changes in Electricity Futures

- Deployed regression models to predict the daily changes in electricity futures in Germany and France using the data from the QRT's 2023 data challenge. Ranked top 100 on the public world ranking based on prediction results.
- Data from different energy sectors were coupled with consumption data for both countries and changes in the coal and carbon emissions future to be used in feature selection. Feature selection and model validation was done using Spearman correlation due to noisy and random nature of the data. A noise resistant Support Vector Regression model was trained for each country to predict the 24h changes in the electricity futures.

Back Test of Moving Average Crossover for Commodities

- Back tested the performance of the moving average crossover method for any two combination of moving averages and found the best performing one for Gold, SP500 and Bitcoin price action, visualized in heatmaps.
- Analyzed different position size and leverage exposure and find the best risk management method for each commodity based on the volatility of the underlying. Also the performance of long only and long-short strategies using the signals generated by the best performing pairs were back tested for each commodity.

Sentiment Analysis for Financial Tweets

- Developed BOW, TF-IDF, Bert, and ROBERTA sentiment analysis models for the Cashtag Piggybaking Dataset which contains 9 million financial tweets across 5 different US markets.
- Analysed performance of each model with the best model reaching an 80% accuracy on the test set. The sentiment results were then used to find correlations between the sentiment behind a cashtag and their price performance for different time windows. The result showed no significant correlation between the two contrary to common sense.

Awards

Bulgarian International Mathematics Competition(IMC) | *Merit Medal*

2018

Iran's International Mathematics Competition(IMC) | *Gold Medal*

2018

Technical Skills

Languages: Python, C, C++, Java, Matlab, HTML

Technologies: GitHub, Unix terminal, PowerShell, Jupyter Notebook, SQL, MongoDB

Frameworks: Numpy, Pandas, Sickit-learn, Statsmodel, TensorFlow, Pytorch, Joblib, OpenAI, NLTK, Transformers, Beautiful-Soup, Urllib