RICARDO ROCHE

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EDUCATION

Carnegie Mellon University
2015-2019

Bachelor of Science, Statistics and Machine Learning
Pittsburgh, PA

GPA: 3.36/4
Dean's List: Fall 2018, Spring 2019

WORK EXPERIENCE

Optiver Trading US
Chicago, IL

Data Scientist
Jun 2019 to Present

- Adapt statistical models for solutions to problems in option theory and market-making, and conduct backtesting to devise profitable trading strategies.
- Design, develop, and maintain graphical tools and heads-up displays used by 30+ traders in live trading environments.
- Implement ETL pipelines to produce critical trading performance datasets.
- Contribute to company-wide data usability initiatives, such as Python packages for creating reports and DAG-based data pipelines.

Intelectum LLC
Mexico City, Mexico

Software Engineering Intern
Summer 2018

- Developed web applications for facilitating distribution of protected content, used by clients and content producers.
- Designed deep neural network to provide daily trading recommendations to clients through the web application.

APS Technology Inc.
Wallingford, CT

Data Analytics Intern
Summer 2017

- Developed database applications in JavaScript to automate communication workflows between four departments in three countries. Used by 15+ employees.
- Analyzed test data of parts in production to predict faulty products.
- Led weekly meetings for the demonstration and testing of the applications.

PROJECTS

Generating Online Reviews
Spring 2019

- Developed a MaskGAN implementation in PyTorch, and training the model on the Yelp Open Dataset to produce realistic reviews. Part of the Yelp Dataset Challenge.

Prediction of Flight Delays
Fall 2018

- Built the contest-winning classification model for the 36-462: Data Mining course-wide final project/competition.

Astrostatistics Research – Catalina Sky Survey
Fall 2016

Carnegie Mellon University, Department of Statistics and Data Science

- Constructed various machine learning models and tested their performance in classifying different types of transient objects, specifically exoplanets.
- Presented findings and visualizations at CMU's undergraduate research symposium.

TECHNICAL SKILLS

Advanced

– Python: Flask Pandas Numpy PyTorch Matplotlib
– R: ggplot tidyverse R Shiny

Proficient

– C
– SQL: PostgreSQL
– UNIX: git vim bash