

OSMANY CORTEGUERA

<https://osmany.dev> | contact@osmany.dev

EDUCATION

- Massachusetts Institute of Technology (MIT)** Cambridge, MA
Master of Engineering in Electrical Engineering and Computer Science Jan 2019 – May 2020
Bachelor of Science in Computer Science and Engineering, Minor in Mathematics Aug 2014 – Jun 2018
- Relevant Coursework: Statistical Inference, Software Development, Machine Learning, Data Analysis.
 - Graduate GPA: 5.0/5.0; Undergraduate GPA: 4.7/5.0

EXPERIENCE

- MIT Lincoln Laboratory** Jan 2019 – May 2020
Research Assistant Lexington, MA

- Developed new techniques to find optimal solutions to the aircraft collision avoidance problem. Evaluated the effect of approximations on the quality of solutions.
- Created a novel simulation environment for data generation. Developed an end-to-end deep reinforcement learning pipeline, and a framework to iteratively improve the model by running experiments.

- Citadel Securities** Jun – Aug 2018
Quantitative Trading Intern Chicago, IL

- Built Python package to aggregate and standardize time-series of financial data from different sources.
- Measured the significance of market events on the price behavior of thousands of financial products using statistical techniques and time-series analysis.

- IMC** Jun – Aug 2017
Quantitative Trading Intern Chicago, IL

- Analyzed time-series of financial data using Pandas, Matplotlib, and Jupyter notebooks.
- Evaluated performance of trading strategies using regression analysis.
- Used stochastic models to predict the behavior of financial products around market events.

- MIT 6.042: Math for Computer Science** Sep – Dec 2015
Lab Assistant Cambridge, MA

- Coached a team of 7 students in problem-solving sessions 10 hours per week.
- Helped students learn how to write proofs and solve problems in number theory, graph theory, and probability.

- NextEra Energy** Jun – Aug 2015
Software Development Intern Miami, FL

- Developed an application to find customers' addresses using their electric meter number. Used JavaScript, HTML, Java EE, and SQL to develop the front-end and services of the application.
- Planned the integration of a system to verify customers' identity using OCR on their government ID.

LEADERSHIP

- MIT Sport Taekwondo:** Equipment Manager ◦ **MIT LoL Club:** Vice-President ◦ **MIT Connect Cuba Club:** Treasurer

SKILLS AND PROJECTS

- Projects:** <https://github.com/osmany/c>: Reinforcement Learning (DQN, Policy Gradient, Policy Iteration, Collision Avoidance, Traffic Modeling), Kaggle competitions, Meme-Maker Website
Skills: Python; Pandas; Matplotlib; PyTorch; Tensorflow; MATLAB; SQL; Java; C++; R; JavaScript