KEVIN J. WU
201 W. 112th Street, Apt. 1A, New York, NY 10026
kjw2157@columbia.edu | (908) 477-7454 | https://kevjwu.github.io/

EDUCATION

COLUMBIA UNIVERSITY New York, NY
Master of Science in Computer Science Sep 2017 – Dec 2018 (expected)
Specialization: Machine Learning. *Coursework*: ML, Reinforcement Learning, Operating Systems. *Overall GPA: 4.0*

HARVARD UNIVERSITY Cambridge, MA
Bachelor of Arts in Applied Mathematics, cum laude Sep 2010 – May 2014
Specialization: Economics. *Coursework:* Data Science, Probability, Linear Algebra, Game Theory. *Overall GPA: 3.62*

TECHNICAL SKILLS

Programming Languages: Python, R, C#, C/C++, Java, SQL.
Machine Learning/Data Science libraries: Tensorflow, Keras, Pandas, NumPy, Scikit-learn, NLTK.
Databases and Platforms: MongoDB, PostgreSQL, SQL Server, Linux, AWS, Hadoop.

PROJECTS AND RESEARCH

Online Learning Techniques for Portfolio Allocation Nov 2017 – Dec 2017
COMS 6998.001, "Bandits and Reinforcement Learning" Final Project

- Evaluated various online portfolio allocation algorithms on modern-day stock market data. Devised improvements to existing algorithms that attained low regret relative to benchmark allocations on US equities from 2000 to 2017.
- Created a simulation environment for implementing and running regret-minimizing learning algorithms and benchmark strategies on financial market data. Code and paper available at https://github.com/kevjwu/no-regret-trading.

Udacity Self-Driving Car Nanodegree Program Nov 2016 – present
Terms: Computer Vision (completed); Sensor Fusion, Localization, and Control (completed); Deep Learning (in progress).

- Wrote and trained convolutional neural networks using Tensorflow and Keras for traffic sign image classification (>95% test accuracy), and for autonomous car steering (successfully steered car around a simulated racetrack).
- Implemented an Unscented Kalman Filter in C++ to perform object detection using LIDAR measurements.

Understanding "Fedspeak:" Identifying the Sources of Market Sentiment in Central Bank Communications
Undergraduate thesis, presented to the Harvard University Department of Applied Mathematics Jan 2014 – Apr 2014

- Used sparse regression techniques to identify potentially market-moving words and phrases in Federal Reserve statements.

PROFESSIONAL EXPERIENCE

Prattle Analytics New York, NY
Quantitative Analyst Apr 2016 – Aug 2017

- Led research and development on a new, alpha-generating sentiment dataset for publicly-traded companies in the US. Conducted backtests of long-short equity trading strategies based on sentiment data to evaluate its quality as a trading signal.
- Designed and wrote ETL pipelines in Python to process third-party data and store the results in MongoDB.
- Worked with project lead to design a relational database schema and migrate existing data to PostgreSQL.

Belvedere Trading Chicago, IL
Quantitative Analyst Jul 2014 – Mar 2016

- Backtested new trading signals based on no-arbitrage pricing relationships between futures and stocks. Worked with traders to evaluate the performance of the new indicators and make adjustments to the model as needed.
- As a trainee, wrote MapReduce procedures in Java to track the profitability of the firm's trading strategies on high-frequency market data, and presented daily market summaries and trade recommendations to the equity index options trading desk.

Deutsche Bank AG New York, NY
Global Markets Summer Analyst Jun 2013 – Aug 2013

- Wrote and distributed summaries of key research pieces for salespeople on the Equity Sales team and their clients.
- Used principal component analysis to analyze portfolio risk for the Municipal Bonds/Derivatives trading desk.