**SAMUEL J. BOUISS**

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linkedin.com/in/samuel-bouiss | https://github.com/sambouiss/Stats\_Dog

**EDUCATION**

**CUNY Bernard M. Baruch College** New York, NY

*Bachelor of Business Administration* Expected December 2019

Major: Quantitative Modeling and statistics | Minor: Mathematics | Major GPA: 3.9

Coursework:

* C++ Programing, Multivariate Calculus, Operations Research, Big Data For Finance, Machine Learning For Finance
* Deep Learning, Probability, Partial Differential Equations, Inferential Statistics, Simulations For Financial Engineering

**Brooklyn Technical High School** Brooklyn, NY

Honors in Math and Science, 5 AP courses completed, 1420 SAT Math and Reading September 2010 - June 2014

**PROFESSIONAL EXPERIENCE**

**Morgan Stanley** New York, NY

*Technology Summer Analyst* June 2019 - present

* Built a deep auto-encoder and Gaussian mixture model hybrid to identify anomalies in trading data and classify new clients
* Gained knowledge on equity swaps trading and how technology can help the functions of an institutional trading desk

**Group One Trading LP** New York, NY

*Trading Analyst Intern* June 2018 - August 2018

* Preformed dimensionality reduction with truncated principal component analysis to visualize a dataset of 50,000 news articles
* Used a convolutional neural net to do natural language processing on the news to find relevant events for traded products
* Learned options theory and participated in mock trading to help traders hedge positions

**Lakebolt Research** New York, NY

*Research and Development Intern* December 2017 - March 2018

* Extracted Bitcoin transaction data from 34 million elements with Python and VBA to construct a pricing model for the futures
* Utilized Bloomberg and academic sources to research futures and get data for the Bitcoin futures
* Presented procedure to the Information Technology Professionals Conference

**EXTRA CURRICULAR & PROJECTS**

**Mathematics Of Deep Learning**  New York, NY

*https://github.com/sambouiss/gymsnake* January 2019 - August 2019

Solved snake using deep reinforcement learning, an NP-hard problem with sparse rewards, with proximal policy optimization

**Traders at MIT**  Cambridge, MA

*1st place of 48 teams* October 2017 - November 2017

* Used multivariate regression to preform timeseries analysis to forecast returns for synthetic securities
* Created options and FX trading algorithms with python to capture mispricing’s while hedging
* Researched options theory and trading strategies, including data visualization and back testing of strategies

**Baruch Traders Club** New York, NY

*Vice-President*September 2017 - August 2019

* Participated in University of Chicago Mid-Western Trading Competition, built models for portfolio optimization and options
* Oversaw design and creation of algorithm to arbitrage an ETF with VBA
* Data-mined 15 years of historical data for the Russell 1000 and S&P 500 to organize a competition with Alexandria Technologies

**PROGRAMING & GENERAL SKILLS**

* C++, Python, KDB, machine learning, deep learning, cross validation, hypothesis testing, gradient descent methods
* Maximum likelihood estimation, options pricing with Monte-Carlo methods, regression analysis, machine vision
* GARCH, binomial pricing models, variance reduction for simulations, probability, matrix calculus

**INTERESTS**

* Poker, Programing, Algorithmic Trading, Machine Learning