

IVAN E. PEREZ

Website: <https://ivaneperez.com> ◇ Github: <https://github.com/IEPEREZ>

3614 Irwin Avenue ◇ Bronx, NY 10463

+1(347)445-8049 ◇ perez.ivan.e@gmail.com

TECHNICAL STRENGTHS

Data Analysis	Python	WebSocket/ASyncIO Framework
Financial Models	R	Pandas, MySQL,
Linear Models	Mathematica	Changepoint Detection

EDUCATION

Hunter College - CUNY, New York, NY

May 2020

M.A. in Statistics & Applied Mathematics (Conc. Math. Finance)

GPA 3.41/4.00

Awards: Joseph A. Gillette Memorial Prize

Relevant Coursework: Adv. Probability Theory I & II, Stochastic Methods of Finance, Mathematical Statistics, Stochastic Optimization by Computer Simulation, Numerical Methods, Microeconomic Theory.

Activities: Organic Chemistry I Adjunct Lecturer, Spring 2017-Spring 2020

Boston University, Boston, MA

May 2014

B.A. in Chemistry (with ACS Certification)

Awards: UROP Student Research Award, UROP Faculty Matching Grant.

Relevant Coursework: Adv. Coordination Chemistry I, Physical Chemistry I & II, Calculus I-III

Activities: Calculus I & II Course Grader, Fall 2011-Spring 2014

WORK EXPERIENCE

Permanent Mission from Dominican Republic to the U.N.

New York, NY

Adviser - Second Committee

March 2019 - September 2019

- Analyzing statistical data produced by subsidiary organs (e.g. UNSD) for a team of five delegates.
- Curating information from Second Committee meetings for interpretation by delegates, and ambassadors.

PROJECTS

Cryptocurrency Order Book Analysis Tool - crobat

Current Project

Github Link

May 2020 - Present

- Developed a Python library that records instances and changes to the Coinbase limit order book.
- Developing CUSUM algorithms to detect changes in stochastic processes governing order arrival rates.

A Study of CUSUM Statistics on Bitcoin Transactions

Thesis Project

CUNY Academic Works Link

July 2019 - May 2020

- Implemented CUSUM algorithms for Compound Poisson processes to detect volatile trading periods.
- Applied GLMs and significance testing to detect periods associated with increased price action.
- Developed tools in Python to collect and analyze arriving market orders in real time.

Calibration of Heston Stochastic Volatility Model

Stochastic Opt. Final Project

Github pdf Link

September 2019 - December 2019

- Developed machine learning algorithms that reliably estimates Black-Scholes-Merton (BSM) and Heston model parameters from observed derivative price dynamics.
- Simulated derivative price dynamics to estimate implied model parameters with over 90% accuracy.