

# Bobby Nixon

Full Stack Engineer · Quantitative Analyst

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## Technical Skills

JavaScript, TypeScript, Node, Express, React, React Native, Redux, Socket.io, Sequelize, PostgreSQL, Heroku, Git, Mocha, Chai, Jasmine, HTML, CSS, R, Python, Mathematica, KDB+, Q, Data Science, Time Series Analysis, &  $\LaTeX$

## Projects

### Hive Mind

[Source Code](#) · [Deployment](#)

A real-time, multi-player, cross-platform mobile application based on the New York Times Spelling Bee game developed in 3 weeks. Deployed on Heroku and designed with React Native, React Hooks, Redux, Express, PostgreSQL, and Socket.io. UI/UX with interactive data visualizations using React Native and D3. Back-end architecture written in TypeScript. Algorithm to generate solutions for all possible puzzles within 2 seconds created using bitmaps and linear algebra.

### Fullstack Records

[Source Code](#) · [Deployment](#)

A fully functional e-commerce web application developed in 9 days using React-Redux, Node, Express, PostgreSQL, Google OAuth, and Stripe integration. RESTful API routes enable a persistent shopping cart. Custom application logic synchronizes front-end orders with back-end inventory preventing users from placing orders on unavailable items. Time-Series data on user-product interactions tracked using custom algorithm.

## Work Experience

### Geneva Trading

Chicago, IL

Quantitative Analyst

June 2018 - August 2018

- Worked as part of the Principle Strategies team (GTM) focusing on statistical arbitrage and low latency market making.
- Utilized signal processing and ML techniques to create an algorithm for the detection and forecasting of patterned trading behavior.
- Utilized KDB+/Q to conduct research and analysis on time series data to identify signals used to inform trading strategies.

### Kennedy For Illinois

Chicago, IL

Economic Policy Analyst/Data Scientist

June 2017 - October 2017

- Led team of four to produce robust analysis of pension liquidity/asset development and regressivity in the IL property tax system.
- Utilized Python to scrape and compile millions of data points on home sales and valuations and produced predictive model for public school student outcomes based on property tax data.

### Deimos Asset Management LLC

New York, NY

Long/Short Equity Analyst

June 2016 - August 2016

- Conducted macro-economic and fundamental equity research for multiple portfolio managers at the fund.
- Utilized original and sell-side research to build M&A and DCF valuation models for select companies.
- Gained exposure to various trading strategies including global macro, FX, options, and index re-balancing arbitrage.

### National Geographic Society

Washington, DC

Expedition Coordinator

August 2015 - September 2018

- Through effort with ongoing Aspen Institute High Seas Initiative the UN Secretary-General created a Special Envoy for the Ocean.
- Worked with Obama White House to draft executive order creating the Papahānaumokuākea Marine National Monument a 582,578 square mile area of land and sea now under permanent ecological protection.
- Utilized Pisces V submersible for research in deep-mesopelagic zone resulting in scientific discovery.

## Education

### Fullstack Academy

New York, NY

Full Stack Software Engineering Immersive

February 2020 - April 2020

### Harvard University

Cambridge, MA

B.S. in Mathematics, Secondaries in Economics & Quantitative Analysis - GPA: 3.58

September 2016 - May 2019

## Extracurricular Activity

### Harvard Men's Rugby

Cambridge, MA

First team selection as scrumhalf, Ivy League

September 2016 - May 2019

- Led team to multiple Ivy League and National Championship Contests in 15's and 7's

### Harvard Investment Association

Cambridge, MA

Member

September 2016 - May 2019

- Prepared stock pitches for board and participated in weekly meetings with topics ranging from investment banking to market efficiency and behavioral finance.