Oliver Hare

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Education

Brown University *Providence, RI*
Master of Computer Science GPA: 4.0/4.0 *Graduated May 2018*

- **CS Classes of note:** 1570 Algorithms, 1730 Programming Langs, 1951a Data Science, 1951g Optimization Methods in Finance, 2470 Deep Learning, 2951z Advanced Algorithmic Game Theory.
- **Research:** Conducted Algorithmic Game Theory research under Amy Greenwald, focusing on the computational complexity of prediction markets and fair division algorithms

Bachelor of Arts in Physics, Bachelor of Arts in Mathematics *Graduated May 2017*

- **Math Classes of note:** 1120 PDEs, 1260 Complex Analysis, 1530 Abstract Algebra, 1610 Probability.
- **Physics Classes of note:** 1420 Quantum Mechanics B, 1530 Thermodynamics.

Work Experience

Bloomberg LP, Software Engineer New York, NY ◦ *Fall 2018 – Present*

- Aid Bloomberg Indices team in the publication of the Bloomberg Barclays Indices
- Manage and oversee projects related to data acquisition and calculation of Bloomberg's convertible indices
- Made enhancements to Bloomberg's index calculation engine improving design and speed; C++, Python.
- Built full stack application for flagging, viewing and analyzing issues in bond data; Javascript, Python.

Brown Computer Science Department, Teaching Assistant *Providence, RI ◦ Fall 2017*

- Helped design, organize, and run CS1570: Design and Analysis of Algorithms
- Instructed students on course materials during TA hours and review sessions

Cartesian Inc, Business Analyst *Boston, MA ◦ Summer 2017*

- Automated VPN Geo-Filter avoidance testing for Amazon Prime Video and other providers; Python.
- Analyzed client and market data to inform strategy in tech and media

Brown Brothers Harriman, FX Electronic Trading Intern *New York, NY ◦ Summer 2016*

- Designed and tested algorithmic trading strategies for the inter-bank foreign exchange currency market
- Tested and trained a financial Kalman Filter and Bellman Ford's algorithm for FX trading

Jane Street Capital, Quantitative Trading Intern *New York, NY ◦ Winter 2016*

- Traded in a team in various mock trading exercises on simulated markets
- Built models to identify trends and determine relationships between securities

Ellington Management Group, Special Projects Intern *Old Greenwich, CT ◦ Summer 2014, Summer 2015*

- Created SQL scripts and Excel tools to aid firm employees in analyzing and interpreting data

Projects and Technical Skills

Daedalus, Indie Video Game *2018 – Present*

- Sole developer and designer on game for playing table top style games expected to be released in 2020
- Built custom programming language for users to change rulesets and to alter game environment in real time
- Designed algorithms to efficiently approximate light and sound on a discrete 3d game board

Webgazer, Computer Vision Deep Learning *2017*

- Improved gaze tracking software initially designed by professors James Tompkin and Jeff Huang
- Devised a convolutional neural net learning tracking user's gaze location based on webcam data
- Reduced distance error between the model's predicted location and the actual results by 40%

One Shot Learning, Deep Learning *2017*

- Created neural network for one shot learning alphabets from the Omniglot dataset

Academic Focus: Algorithms, Machine Learning, Programming Languages, Data Science, Statistics, Analysis.
Proficient Languages: Python, C++, C#, Java, Matlab, SQL, HTML/CSS, Javascript, Pyret.

Creative Skills and Hobbies

Art and Design: Photoshop, Graphic Design, Experience in Drawing, Pen and Ink, Digital Drawing and Painting
Music: Classically trained in piano, performed in venues and competitions, able to perform impromptu pieces
Hobbies: Competitive Ballr0om Dance, Board games, Stand up and Improv Comedy, Fiction Novels, Tennis, Dota 2