Oliver Hare

oliver-hare.com ◦ github.com/buggy-virus

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Education

Brown University

Master of Computer Science GPA: 4.0/4.0   Providence, RI ◦ *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 Professor Amy Greenwald, focusing on the computational complexity of prediction markets and fair division algorithms

Bachelor of Arts in Physics, Bachelor of Arts in Mathematics   Providence, RI ◦ *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 on simulated markets as part of a team attempting to identify arbitrage and execute strategies
- Built models to identify trends and determine relationships between securities

Ellington Management Group, Special Projects Intern   Old Greenwich, CT ◦ *Summer 2014, 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 Ballroom Dance, Board games, Stand up and Improv Comedy, Novels, Tennis, Dota 2