

Michael Truell

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EDUCATION

Horace Mann School, Bronx, NY

Class of 2018

- 4.0 Unscaled GPA

EXPERIENCE

Research Intern, MIT Probabilistic Computing Group

June 2017 - August 2017

- Integrated UC Berkeley's "Loom" Bayesian inference engine with MIT's "BayesDB" probabilistic computing platform
- Learned probability theory; hands on experience with Bayesian nonparametric models
- Member of the RSI program; recognized as a Department of Defense Scholar

Software Engineering Intern, Two Sigma Investments

June 2016 - March 2017

- Co-founded and co-developed Two Sigma's "Halite" online programming competition (<https://halite.io>)
- Series drew 7,000+ users from 110 countries who submitted 50,000+ unique bots
- Original competition attracted 60+ individual contributors on Github
- Two Sigma's first high school intern (age of 15)

Independent Reinforcement Learning Researcher

June 2015 - May 2016

- Augmented the Q-learning algorithm with intelligent action and model selection
- System learned desired actions from human operators in minutes
- Algorithm required 4x less data than standard reinforcement learning implementations
- Spun off codebase into an open-source ML library (300+ Github stars)

AWARDS & HONORS

Intel ISEF Grand Award: Second Award in Robotics and Intelligent Machines

Intel ISEF Special Award: Second Award, National Aeronautics and Space Administration (NASA)

Intel ISEF Special Award: First Award, CERN (award included a week at the CERN campus)

New York City Science and Engineering Fair (NYCSEF): First Prize in Computer Science

Intel Excellence in Computer Science Award

American Computer Science League Perfect Programming Score at Nationals

RELEVANT ACTIVITIES

Horace Mann FRC Robotics, *Head of Programming and Electronics*

2015 - Present

Horace Mann American Computer Science League, *Co-captain*

2015 - Present

Horace Mann Programming Club, *Co-captain*

2015 - Present

RESEARCH PAPERS

Truell, M., Spector, B. (2017). *The Design and Implementation of Modern Online Programming Competitions*. To be submitted to the IEEE Journal on Games and AI.

Truell, M., Gruenstein, J. (2016). *A Universal Robot Control System Using Reinforcement Learning with Limited Feedback*. Poster presented at ISEF 2016, Phoenix, Arizona.

SKILLS

Software

Python, Java, C++, PHP, JS, HTML, Angular, LAMP, Flask, Docker

Hardware

OpenSCAD, AVR, ESP8266, NI

Machine Learning

Reinforcement Learning, Evolutionary Algorithms, Bayesian Nonparametrics