Zachary Hervieux-Moore

Profile

PhD candidate researching deep reinforcement learning and its applications. My goal is to expand the Alpha Zero algorithm to a larger class of games and apply it to robotics problems. Broad interest in machine learning and software engineering. When I'm not reading arXiv, I'm reading Hacker News.

Contact

Phone: (609) 608-0336
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Website: hervature.com

Skills

Programming:
C++, Python, Ruby

Web Development:
HTML5, CSS3, JavaScript, SQL

Web Frameworks:
Django, Ruby on Rails, Bootstrap

Software:
Git, Perforce, Puppet, LaTeX, Tensorflow

Languages:
English, French

Awards

- The Gordon B. and Nancy R. Stewart, Jr. Fellowship
- Dean's Scholar x 4
- Nellie & Ralph Jeffery Award in Mathematics x 2
- Edith Whyte Prize in Macroeconomics Theory
- The Annie Bentley Lillie Prize in Calculus
- Queen's Principal's Scholarship
- Governor General's Award

Education

Princeton University, Princeton, NJ   2016-present
—PhD Candidate in Operations Research and Financial Engineering

- Linear & Nonlinear Optimization
- Statistical Theory and Methods
- Probability Theory
- Advanced Algorithm Design
- Computational Finance in C++
- Convex & Conic Optimization
- Statistical Learning & Nonparametric Estimation
- Stochastic Calculus

Queen's University, Kingston, ON   2011-2016
—Bachelor of Science Engineering, Mathematics and Engineering, Systems and Robotics Option
—Bachelor of Arts, Economics

Experience

Stratyfy, NYC, NY   Summers 2018, 2019
Data Scientist
—Developed a novel discretisation algorithm that boosted our models' performance to match state of the art techniques.
—Wrote technical and non technical case studies of our methodology that are used to pitch customers, investors, or published online.
—Built internal tools written in Python to automate the process of transitioning customers to our machine learning platform.

Siemens Healthineers, Princeton, NJ   Summer 2017
Business Program Intern
—Responsible for the formulation and development of the underlying algorithm used in a scheduling application.
—Programmed in Python using Pandas to manipulate the data and CPLEX to model and solve the optimization problem.
—Researched deep learning and reinforcement learning to create a novel scheduling algorithm.

Altera Corp. (now Intel PSG), San Jose, CA   2014-2015
Software/Hardware Engineer Intern
—Maintained and improved internal test infrastructure.
—Regularly coded Perl firmware and Django web applications. Automated the deployment of infrastructure using Puppet.
—Modernized the test infrastructure by upgrading the OS and refactoring code to utilize the latest stable release of various software packages.

Queen's University, Kingston, ON   2011-2016
Relevant Coursework
—Design project titled "Region Tracking in a Sequence of Images". Applied calculus of variations in order to achieve this. Developed an application that succesfully tracked the hand of a user from a webcam video and the outline of a bone throughout an MRI scan.
—Course project titled "Applying Q-Learning to Flappy Bird". Achieved human-level performance by applying a reinforcement learning algorithm to the game Flappy Bird. Simulated the game and coded the algorithm in MATLAB.