Matt Beveridge

/mattbev

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Education

Massachusetts Institute of Technology
M.Eng. in Computer Science – Artificial Intelligence
B.S. in Computer Science and Electrical Engineering
B.S. in Mathematics
Minor in Theater Arts
September 2016 – June 2021 | Cambridge, MA

- Thesis: *Consistent Depth Estimation in Data-Driven Simulation for Autonomous Driving*.
- Advisor: Prof. Daniela Rus, Distributed Robotics Lab.

Research

MIT CSAIL – Data-Driven Inference Group
September 2019 – May 2020 | Cambridge, MA

- Created novel neural network frameworks to learn the optimal pooling layer metric for a given problem.

MIT Media Lab – Camera Culture Group
September 2018 – February 2019 | Cambridge, MA

- Improved autonomous vehicle imaging in fog using visible light and time of flight ray tracing.

MIT CSAIL – Interactive Robotics Group
February – May 2017 | Cambridge, MA

- Advanced human-like decision making in AI through human studies with adversarial games.

Selected Courses

* Audited † Current

AI/ML: Machine Learning; Artificial Intelligence; Deep Learning*; Computer Vision; NLP†
Math: Numerical Analysis; Algorithms; Optimization; Information Theory; Probability; Stochastic Processes; Statistics & Data Analysis; Graph & Combinatorial Theory*; Linear Algebra; Differential Equations, Calculus
Robotics/Programming: Computational Sensorimotor Learning†; Intelligent Robot Manipulation; Software Construction; Fundamentals of Programming

Projects

(full list at mattbeveridge.com/portfolio)

Robot Juggler: Robotic arm that stably juggles a ball.
Federated Learning: Attacks and defenses for FL.
Blacktip Python Library: Financial analysis toolkit.
Karaoke: Plays songs parsed from text files via browser.

Experience

MIT Driverless *Simulation Team Lead*
August 2020 – Present | Cambridge, MA

- Innovating data-driven (photorealistic) and end-to-end simulation for high-speed autonomous vehicles.

Draper Lab *Machine Learning Researcher*
June – August 2020 | Cambridge, MA

- Formulated general uncertainty quantification metrics with application to competency-aware reinforcement learning.

NASA *Research Software Engineer*
June – August 2019 | Houston, TX

- Prototyped, tested, and analyzed system reliability measures for the ISS, Orion spacecraft, and Gateway space station.

General Atomics ASI *Machine Learning Engineer*
June – August 2018 | San Diego, CA

- Developed deep learning-based visual quality assurance, culminating with Alpha deployment to the shop floor.

nference *Data Scientist*
February – June 2018 | Cambridge, MA

- Analyzed sentiment of social media and parsed disease indicators, mapping relational trees by semantic association.

Mosaic Power *Software Engineer*
June – August 2017 | Frederick, MD

- Led an energy optimization project utilizing learned resident patterns and intraday fluctuations in power grid demand.

Leadership & Activities

MIT Applied Machine Learning *Teaching Assistant*
August 2020 – Present | Cambridge, MA

- Mentoring students on semester-long projects in ML.

MIT EnergyHack *Director of Corporate Relations*
June 2019 – May 2020| Cambridge, MA

- Coordinated hackathon sponsorships and challenges.

Delta Kappa Epsilon Fraternity *Treasurer*
February 2018 – September 2020 | Cambridge, MA

- Managed assets for 50 members and 1 employee.

MIT Football *Team Member*
August 2016 – December 2017 | Cambridge, MA

- Academic All-Conference.

Skills

Languages (Currently Using): Python, Julia, SQL, CMD
Languages (Familiar With): Java, R, C++, C#, JavaScript/HTML/CSS, React, LaTeX, QT, Shell
Specific Knowledge: PyTorch, NumPy, Pandas, Drake, Sphinx, CI, TensorFlow, CNTK, Git, Linux, AWS