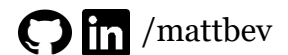


# Matt Beveridge



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## Education

### Massachusetts Institute of Technology

September 2016 – June 2021 | Cambridge, MA

M.Eng. in Computer Science – Artificial Intelligence

- Thesis: *Consistent Depth Estimation in Data-Driven Simulation for Autonomous Driving*.
- Thesis Advisor: Prof. Daniela Rus.
- B.S. in Computer Science and Electrical Engineering
- B.S. in Mathematics
- Minor in Theater Arts.

## Research (papers: [mattbeveridge.com/publications](http://mattbeveridge.com/publications))

### 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; Natural Language Processing†

**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: [mattbeveridge.com/projects](http://mattbeveridge.com/projects))

**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.

## Skills

*Proficient:* Python, Java, R, Julia, SQL, Git, Bash, PyTorch, NumPy, Pandas, Sphinx, Linux, Matplotlib

*Competent:* JavaScript/HTML/CSS, React, LaTeX, TensorFlow, CNTK, Drake, AWS, GCP

*Familiar:* C++, C#, CI, QT, Shell

## 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.

### Inference 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.