

EDUCATION

Massachusetts Institute of Technology (MIT)

Candidate for Bachelor of Science in Electrical Engineering and Computer Science • GPA: 4.8/5.0

Cambridge, MA

June 2020

New Holstein High School

• GPA: 4.0/4.0 • Rank: 1/90

New Holstein, WI

Sep 2012 – May 2016

Relevant Coursework

• Underactuated Robotics • Probability and Random Variables • Feedback System Design • Circuits and Electronics • Signals and Systems
• Machine Learning • Advances in Computer Vision • Design and Analysis of Algorithms • Computer Systems Engineering

EXPERIENCE

Dense Reconstruction for Augmented Reality

Computer Vision Software Engineering Intern at Niantic, Inc.

Sunnyvale, CA

May 2019 – Aug 2019

- Creating dense reconstruction software for real-time augmented reality applications.

Art Recommendations with the Microsoft HoloLens

Deep Learning Intern at Microsoft

Cambridge, MA

Jan 2019 – Feb 2019

Wrote an augmented reality application for the Microsoft HoloLens to recommend art with computer vision in The Metropolitan Museum of Art. The open-sourced repo is at <https://github.com/microsoft/HoloLens-Art-Recommendations>.

Subject Tracking for Autonomous Quadcopters

Deep Learning Intern at Skydio

Redwood City, CA

Jun 2018 – Aug 2018

- Created and evaluated convolutional recurrent neural networks for trajectory prediction using images for semantic scene understanding.

Deep Learning and Computer Vision

Deep Learning Intern at The Markov Corporation

Palo Alto, CA

Jan 2018 – Feb 2018

- Worked on deep learning for stereo vision with computer vision algorithms in OpenCV and convolutional neural networks in Keras and TensorFlow.

Autonomous Vehicle Software Development for Volvo Cars

Summer Intern at Zenuity (Volvo / Autoliv)

Detroit, MI

Jun 2017 – Aug 2017

- Focusing on creating computer vision algorithms for autonomous driving. Implemented computer vision testbed and created software for autonomous valet parking.

Robotics Research at the MIT CSAIL

Undergraduate Researcher in the Robot Locomotion Group

Cambridge, MA

Sep 2017 – May 2019

- Create a pipeline for self-supervised instance segmentation and automatic sparse keypoint discovery for robotic manipulation. See the project at <http://sparkey.xyz/> and code at <https://github.com/ethanweber/sparkey>.
- Worked with NASA's humanoid robot, Valkyrie and Atlas for motion planning and fall recovery. Implemented algorithms in and out of simulation. Used Drake (<http://drake.mit.edu/>) and collaborated with Toyota Research Institute.

Undergraduate Researcher in the Model-Based Embedded and Robotics Systems Group

Sep 2016 – Jun 2017

- Worked on using a land rover and a quadcopter in cooperation to navigate an area and perform tasks autonomously.

AREALYTICS

Project Teammate and Software/Hardware Developer

Cambridge, MA

Apr 2017 - current

- Created a class final project that can track wireless devices and log anonymous location analytics for retail, home, and educational use cases. We obtained startup funding from MIT Sandbox but didn't have time to continue the project.

Hackathon Projects

MIT - HackMIT 2017

Sep 2017

- Created an AR travel application to virtually travel to cities in an augmented world. Won "Best Use of Amadeus APIs" and "Best Travel Hack" by Concur

University of Michigan—Ann Arbor - MHacks 6

Sep 2015

- Created a project to help the visually impaired through object recognition and vibration feedback. Won "Best Use of Microsoft Technology"

LEADERSHIP

TechX

SpecialX Director

Cambridge, MA

May 2018 – Current

- Organize VC and startup events, tech talks, and experiment with new ways to improve MIT's campus through tech

SKILLS

Computer: Python, TensorFlow, PyTorch, Keras, C++, C, Java, JavaScript, HTML, CSS, C#, Linux, Arduino, Raspberry Pi, Processing, PTC Creo CAD, SolidWorks

Activities: TechX, Machine Intelligence Community, CSAIL Robotics Research, Soccer, Zeta Psi Fraternity
