

## EXPERIENCE

### Waymo

*Senior Software Engineer, Perception*

Working on perception for Waymo Via, the trucking and freight product.

San Francisco, CA

Jul 2020 – Present

### Cruise

*Engineering Manager, Machine Learning*

Led a 9 person team of researchers and engineers focused on improving object detection at Cruise. Built, maintained, and iterated a primary production object detector. Conducted applied research in object detection, tracking, and simulation. Reduced object detection related safety events by 40% in 6 months.

*Senior Machine Learning Engineer*

San Francisco, CA

Jan 2020 – Jul 2020

Tech lead and project owner: emergency vehicles, audio understanding, lidar detection (birds eye view). Researched deep learning models for computer vision, video classification, audio, lidar, tracking, and sensor fusion. Developed systems end-to-end, including hardware design, algorithm and infrastructure development, model deployment, and validation and testing. Built automated retraining and active learning systems to improve models automatically.

### Fitbit

*Research Scientist*

Spearheaded effort to introduce deep learning to Fitbit R&D. Developed and validated Tensorflow-based networks on a variety of data modalities, which included building associated training infrastructure. Built machine learning tooling for model deployment both to the cloud as well as low-power microcontrollers.

Researched machine learning and signal processing methods for a variety of data, including images, accelerometer/gyroscope, PPG, and audio. Wrote firmware that ships on products, including on the Fitbit Ionic and Versa. Acted as a technical mentor and leader, presenting at internal talks and mentoring interns.

San Francisco, CA

June 2016 – Feb 2018

### University of Michigan Computer Science Dept.

*Graduate Student Research Assistant*

Investigated methods for using sensor data and novel deep learning networks to improve outcomes in cardiothoracic surgery. Researched advanced methods of static compiler optimization by applying deep sequence models to LLVM intermediate language.

Ann Arbor, MI

August 2014 – June 2016

### Internships

*DSP Intern, iZotope Inc.*

*Software Intern, Digital Design Corp. (began at age 16)*

Summer 2013

Summer 2008/09/10/11/12

## EDUCATION

MS in Computer Science, **University of Michigan**, Ann Arbor

2014 – 2016, GPA 3.77

BS in Electrical Engineering, **Tufts University**, Medford

2010 – 2014, GPA 3.73

## SKILLS

**ML/DL:** SciPy/NumPy/Pandas, Tensorflow, PyTorch, TensorRT

**Skills:** Machine Learning, Deep Learning, Computer Vision, Signal Processing, Statistics, Hardware

## PUBLICATIONS

Zekany S, **Harada N**, Rings D, Laurenzano M, Tang L, Mars, J. CrystalBall: Statically analyzing runtime behavior via deep sequence learning, MICRO 2016

**Harada N**, Saeed M, Baveja S, Syed Z. Evaluating the Utility of a Multi-factorial Computational Model and Simplified Multi-factorial Risk Score to Predict Postoperative Atrial Fibrillation Following Cardiothoracic Surgery, American Heart Association (AHA) Scientific Sessions, 2015.