ANDREW PORT

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port.codes

M.S. in **Computer Engineering**, *UC Santa Cruz*
M.S. in **Applied Mathematics**, *UC Davis*
B.S. in **Mathematics**, *Worcester Polytechnic Institute*
Northfield Mount Hermon High School

PROFILE

Machine Learning and **Computer Vision Engineer.** Experienced with creating, training, improving, and evaluating **deep learning** models and pipelines, mostly for research and recently for production. I've been working in a mixed MLE / infra role for the last two years focused on metrics and infrastructure used to evaluate autonomous driving stacks. Resourceful problem solver with a wide technical skillset and a deep background in both deep learning and mathematics.

RECENT EMPLOYMENT

(2022-Current) **Engineer @ Motional**

- Worked as MLE for ML Planner and ML Environment teams building and improving autonomous vehicle training and evaluation pipelines, datasets, and models.
- Developed new prediction and planning metrics based on model owner reqs
- Upgraded Motional's ML code base to support PyTorch v2
- Developed ML models used in CI testing of an autonomous vehicle stack.
- Worked as part of team to build and maintain infrastructure, datasets, and metrics used in CI to cost effectively simulate and evaluate vehicle performance over hundreds of scenarios and hours of real-world sensor data distributed over hundreds of GPUs
- Developed intelligent assistant prototype

(2019 Summer and Fall) **Computer Vision Research Intern @ FXPAL**

- Invented GAN-based method of visual-to-auditory sensory substitution (i.e. communicating visual information aurally)
- Authored two related patents, one in US (granted) and one in Japan (pending), and two related papers.

(2018 Summer) **Senior Technology & Software Intern @ Rare.org**

- Designed and developed computer vision technology to help fishermen in Belize and Honduras identify the origin of fish that had already been brought to land. The goal being to enable the protection of overfished areas.
- Built a custom background for fishermen to take photos against. This enabled color correction and image rectification.
- Built a pipeline to color correct, rectify, segment, and classify the images taken by the fishermen.

(2013-2017) **Adj. Professor of Mathematics and Statistics @ Sacramento City College**

- Extended Opportunity Programs & Services (EOPS) Professor

NOTEWORTHY INDEPENDENT PROJECTS

svgpathtools (2016): Creator of the somewhat popular (e.g. see pystats) actively contributed-to library of object-oriented tools for manipulating SVG Path objects and Bezier curves in Python

SELECT PUBLICATIONS AND PATENTS

- C. Kim*, A. Port*, M. Patel, *Face-to-Music*, CVPR Sight and Sound (2021)
- Port, C. Kim, M. Patel, *Deep Sensory Substitution*, submitted to WACV (2021)
- Andrew Allan Port, Doga Buse Cavdir, Chelhwon Kim, Mitesh Kumar Patel, Donald Kimber, Qiong Liu. *Transmodal Translation of Feature Vectors to Audio for Assistive Devices* JP Patent No. JP2021056499A (published, April 2021); US Patent No. US11069259B2 (granted, July 2021)