Michael Li

bearseascape@gmail.com | ml6@andrew.cmu.edu | (408) 219-3978 | https://ml5885.github.io

EDUCATION

Carnegie Mellon University, B.S. in Statistics and Machine Learning *2022 – Expected Graduation (2026)*

- Planning to declare an additional major in Artificial Intelligence
- Completed Courses: 15-112: Fundamentals of Programming and Computer Science, 21-259: Calculus in Three Dim., 36-202 Meth. for Statistics & Data Science, 21-127: Concepts of Mathematics, 15-122: Principles of Imperative Computation
- Cumulative GPA: 3.81

Amador Valley High School, Pleasanton, CA *2018 – 2022*

- AP Courses: Computer Science A (5), Calculus BC (5), Statistics (5), English Literature and Composition (5)
- SAT (1580/1600)

EXPERIENCE

Software Engineer Intern, Stealth *2022 – Present*

- Deployed OpenAI's speech recognition neural net **Whisper** in **Python** and evaluated model performance..
- Utilized **React** to create a web-app demo of virtual talking assistant for elderly people.

Research Intern, University of Victoria *June 2021 – Present*

- Worked with Professor Xuekui Zhang to implement machine learning models with **Python** to predict COVID outcomes in Canadian provinces based on U.S. county demographic data.
- Published as feature article in the Journal of Global Health: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10208648/pdf/jogh-13-03029.pdf

Founder & Developer, COVIDCatcher (https://www.c0vidcatcher.org) *2021 – Present*

- Developed a low-cost, multimodal, machine learning based app for detecting COVID-19 symptoms and coughs with **Python**, **Tensorflow**, and **VGG-19**
- Objective: To help immunocompromised and elderly understand symptoms w/o leaving the safety of their homes
- Bay Area BioGENEius Finalist - presented to panel of biotechnology leaders (see my poster here)

Software Engineer, Amador Valley High School Robotics Club *2018 – 2022*

- Won 2nd place in 2022 against top universities in the RoboNation International RoboSub Competition
- Wrote code leveraging **OpenCV** and **C++** for **object detection** and **image processing** to detect pathmarkers
- Coordinated with machine learning team to create ML workflows for real-time object detection and convert **C++** code to **Python**

Software Developer Intern, Omou Learning *June 2020 – 2021*

- Omou is a digital learning space for tutoring centers to connect student, parent, and teacher communities.
- Built Google Classroom integration to enable users to sign in via Google and invite/unenroll students
- Worked with **React** framework and built features using **HTML**, **CSS** and **JS**

SKILLS

- Java (6+ yrs.), Python (5+ yrs.), C++ (5+ yrs.), Web development using React, HTML, CSS, JS (5+ yrs.), R (1 yr) Piano (12 yrs.)

AWARDS & RECOGNITION

- **California Science and Engineering Fair**, Qualifier (COVIDCatcher), 2021 and 2022
- **Synopsys Alameda County Science and Engineering Fair**, First Place in Systems Software, Computer Science and Programing (COVIDCatcher), 2021 and 2022
- **Bay Area BioGENEius Challenge**, Finalist (COVIDCatcher), 2021
- **HackItShipIt Hackathon**, First Overall, 2020
- **Data Day Grind Hackathon**, Best Data Visualization, 2020
- **United States Open Music Competition**, First Place - Showcase Piano Solo Senior, 2022
- **MTAC Alameda County East Piano Competition**, First Place - Division D(Senior), 2022
- **National Merit Scholarship Corporation,** Finalist , 2022

- **To the Moon and Hack Hackathon**, Third Overall, 2020
- **USA Computing Olympiad**, Silver Division, 2018

- **Collegeboard**, AP Scholar with Distinction, 2020
- **United States Open Music Competition**, First Place - 5C Piano Open Solo (Romantic Period), 2021
- **MTAC Alameda County East Piano Competition**, Second Place - Division C (Senior), 2020
- **United States Open Music Competition**, Second Place - Piano Treasury of Romantic Composers (Senior), 2019
- **MTAC Alameda County East Piano Competition**, Second Place - Division B (Junior), 2018
- **MTAC Certificate of Merit**, Piano - Level Advanced with State & Branch Honors, 2019
- **Amador Valley Swim Junior Varsity**, Athletic Award A, 2019
- **National French Contest**, Bronze Award, 2021

CTO, Umlaut Foundation, Pleasanton, CA *2020 – 2022*

- Designed and implemented podcasting features, article content management, and newsletter templates
- Umlaut is a non-profit that connects Californian foster youth with volunteer-sponsored mentorship in diverse topics
- Maintained Umlaut Foundation website across multiple devices and browsers(i.e. Chrome, Safari, iPhone, Android), and address bugs such as overlapping text/images

Public Forum Debate, AVHS Speech and Debate Club *2018 – 2022*

- Developed skills in critical thinking, rhetorical strategy, and persuasion
- Researched and debated a diverse range of topics from Medicare for All and UBI to West African urbanization and Venezuelan sanctions
- Effectively communicate ideas persuasively and adapt to real time situations

Associate Field Manager, Rishi Kumar For Congress *June 2021 – November 2021*

- Sent mass emails through YAMM informing District 18 voters of 2022 Congressional election
- Monitored communications to respond to any reply emails and ensure voters concerns were addressed
- Canvassed in Palo Alto and directly engaged with voters to understand the issues they care about and learned to quickly adapt to situations in order to converse with a voter and persuade them to vote

Mathworks Math Modeling Challenge *February 27 2021*

- Worked with team of three to use applied mathematical modeling to tackle a real-world problem under time and resource constraints and produced viable paper considered for Technical Computing Award
- Learned/implemented algorithms in Python including: Simple/Multiple Linear Regression, Logistic Regression, Markov Chain, and Monte Carlo simulation in preparation for the challenge,
- Implemented exponential regression to predict cost per unit of bandwidth based on previous trends reported in Ofcom and FCC
- Developed a multivariate model to predict a given household's internet needs based on household size, income, age, and bandwidth activity.

Researcher, Lumiere Research Program *Jan 2021 – March 2021*

- **"A Programmable Network Router Design for Faster Stateful Packet Processing"**
- Proposed a novel design for a parallel processing router that guarantees functional equivalence, with a fast and flexible processing speed, to address processing speed limits in a Post-Moore world
- Worked with Vishal Shrivastav, former Yale Postdoctoral Associate/Purdue Assistant Professor, on independent router design research project; pursuing publication

- Learned skills in time-management, organization, and problem-solving, and developed an understanding for academic language and the research process

Performer, Winner's Concert, United States Open Music Competition *May 15, 2021*

- Performed Grieg Notturno, Op. 54 No. 4 in front of live audience of 100+ people at the Oakland California Temple

Independent Research, "Predicting Legislative Success in the California State Legislature" *2021 – 2022*

- Pursue research performing analysis and prediction of factors that lead to legislative success in the California legislature via machine learning.