Jeffrey Ma

San Jose, CA | jma@caltech.edu | +1 (408) 406-4015 | U.S. Citizen

EDUCATION

CALTECH

GPA 4.2 | Expected Grad: 2022
B.S. in Computer Science + BEM
(Business, Economics, and Management)

COURSEWORK

UNDERGRADUATE

Probability Models
Communication Networks
Algorithms
Machine Learning and Data Mining
Functional Programming
Quantitative Risk Management
Learning Systems
Applied Linear Algebra
Computing Systems
Decidability and Tractability
Data Structures
Discrete Mathematics

AWARDS

RESEARCH

- 2020 Hummel-Gray Travel Fund award
- 2020 Housner Student Discovery Fund recipient
- Gee Family Poster Competition Finalist

ACADEMICS

- Bellarmine College Prep CS Award
- 2-Time American Invitational Mathematics Exam (AIME) Qualifier
- National Merit Scholarship recipient

ATHLETICS

- 4-Time SCIAC Swimming Championship Finalist in the 100-yd and 200-yd Breast
- 2-Time SCIAC All-Academic Team

SKILLS

• Python • Java • C/C++ • OCaml •
• x86-64 Assembly • MATLAB •
• Mathematica • Haskell • Git •
• TensorFlow • sklearn • NumPy •
• pandas • Illustrator • Photoshop •

LINKS

linkedin.com/in/jma18
github.com/18jeffreyma

EXPERIENCE

GOOGLE | Software Engineering Intern

Summer 2020 — Mountain View, CA

- Worked on the Google Brain team on TensorFlow Extended (TFX), an end-to-end platform for automatically deploying ML models in production. Implemented component improvements to support continuous pipeline and asynchronous component execution and explored support for data streaming.

CALTECH | Head Teaching Assistant

May 2019 – Present — Pasadena, CA

- Serving as a teaching assistant for both CS24 (Computing Systems, Fall 2019, Fall 2020) and CS2 (Data Structures, Winter 2020). Responsibilities include developing assignments, grading, and holding weekly office hours. Currently serving as CS24 Head TA for Fall 2020.

STANFORD UNIVERSITY | Research Fellow

Summer 2019 (extended to January 2020) — Stanford, CA

- Selected for an undergraduate research fellowship at the Magnetic Resonance Systems Research Laboratory (MRSRL). Developed a novel deep-learning model to identify motion artifacts in pediatric MRI and provide data-informed suggestions to MRI technicians. Paper accepted and published to the 2020 IEEE International Symposium on Biomedical Imaging (ISBI'20).

STANFORD UNIVERSITY | Research Intern

Summer 2017 (extended to Summer 2018) — Stanford, CA

- Selected for the 2017 Stanford Institutes of Medicine Summer Research Program (SIMR). Developed a machine-learning classifier to diagnose Autism Spectrum Disorder based on a patient's facial engagement and ability to recognize emotions. Paper accepted and published in Journal of Medical Internet Research (JMIR).

INTEL CORPORATION | Engineering Intern

Summer 2016 (extended to December 2016) — Santa Clara, CA

- Built hardware prototypes and developed connecting Android apps. Applied Google's Location API and Bluetooth Low Energy (BLE) communication. Gained experience with electrical circuit design and the Arduino hardware kit.

PUBLICATIONS

DIAGNOSTIC IMAGE QUALITY ASSESSMENT AND CLASSIFICATION IN MEDICAL IMAGING: OPPORTUNITIES AND CHALLENGES. (First Author)
J. Ma, U. Nakarmi, et al. (DOI: 10.1109/ISBI45749.2020.9098735).
Published to the IEEE International Symposium on Biomedical Imaging (ISBI 2020).

TOWARD CONTINUOUS SOCIAL PHENOTYPING: ANALYZING GAZE PATTERNS IN AN EMOTION RECOGNITION TASK FOR CHILDREN WITH AUTISM THROUGH WEARABLE SMART GLASSES. (Co-author)
A. Nag, et al. J Med Internet Res 2020;22(4):e13810 (DOI: 10.2196/13810)
Published to the Journal of Medical Internet Research (JMIR).

OTHER INTERESTS

SELF-BUILT A HIGH-PERFORMANCE DESKTOP PC – ordered and assembled parts and stress-tested the finished PC build

CALTECH ADMISSIONS AMBASSADOR AND FROSH CAMP COUNSELOR – selected by the Admissions and Deans' Offices to serve as an undergraduate representative, leading campus tours and organizing freshmen orientation.