MSC 682
1200 E. California Blvd.
Pasadena, CA 91126

Jeffrey J. Ma
jma@caltech.edu
(408) 406-4015

U.S. Citizen
4660 Metropolitan Way
San Jose, CA 95135

EDUCATION

California Institute of Technology (Caltech)   2018 – Present
- GPA: 4.2. Majoring in Computer Science and BEM (Business, Economics, and Management). B.S. expected 2022.
- **Relevant Coursework**: Machine Learning and Data Mining, Functional Programming, Learning Systems, Applied Linear Algebra, Computing Systems, Decidability and Tractability, Data Structures, Discrete Mathematics.

WORK EXPERIENCE

Google, *Incoming Software Engineering Intern*   Summer 2020
- Will be working on the TensorFlow platform on the Google Brain team.

Stanford University, *Research Fellow*   Summer 2019 (extended to Jan. 2020)
- 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).

California Institute of Technology, *Teaching Assistant*   Summer 2019 – Present
- Serving as a teaching assistant for both **CS24 (Computing Systems, Fall 2019)** and **CS2 (Data Structures, Winter 2020)**. Responsibilities include developing assignments, grading, and holding weekly office hours.

Stanford University, *Research Intern*   Summer 2017 (extended to July 2018)
- Selected for the **2017 Stanford Institutes of Medicine Summer Research Program (SIMR)**. Developed a machine-learning classifier for diagnosing 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 Dec. 2016)
- Built hardware prototypes and developed connecting Android apps. Applied Google's Location API and Bluetooth Low Energy (BLE) wireless communication. Gained experience with electrical circuit design and the Arduino hardware kit.

PUBLICATIONS

- J. Ma, U. Nakarmi, et al. "Diagnostic Image Quality Assessment and Classification in Medical Imaging: Opportunities and Challenges." *ArXiv:1912.02907*. (First Author)
- A. Nag, et al. "Toward Continuous Social Phenotyping: Analyzing Gaze Patterns in an Emotion Recognition Task for Children with Autism through Wearable Smart Glasses." *Journal of Medical Internet Research. 10.2196/13810.* (Co-author)

AWARDS

- Recipient of the **2020 Patrick Hummel and Harry Gray Travel Fund** Award
- Recipient of the **2020 George W. Housner Student Discovery Fund** Award
- **Gee Family Poster Competition Finalist** – 8 finalists selected for excellence in scientific oral communication.
- **Andy Grove Scholarship for Intel Employees' Children** – selected from over 2000 undergraduate applicants.
- **Bellarmine College Preparatory Computer Science Award**; **Bellarmine Matteo Ricci Award** (selected for embodying Jesuit ideals and contributing to community at Bellarmine)
- **4-Time Southern California Intercollegiate Athletic Conference (SCIAC) Swimming Championship Finalist** in the 100-yd and 200-yd Breaststroke; **2-Time SCIAC All-Academic Team Member.**
- **2-Time American Invitational Mathematics Exam (AIME) qualifier** – scored in the top 5% of AMC12 nationwide
- **National Merit Finalist and Scholarship recipient; National AP Scholar.**

SKILLS

- **Languages:** Python, Java, C/C++, OCaml, x86-64 Assembly, MATLAB, PHP, SQL, Mathematica.
- **Tools:** Git, TensorFlow, Keras, sklearn, NumPy, pandas, Adobe Illustrator, Photoshop

OTHER ACTIVITIES & INTERESTS

- **Self-built a high-performance desktop PC** – ordered and assembled parts; stress-tested the finished PC.
- **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.
- **Caltech Interhouse Athletics Manager** – organizing interhouse sport competitions between undergraduate Houses