

Jeffrey Ma

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🇺🇸 U.S. Citizen

EDUCATION

CALTECH

GPA 4.2 | Expected Grad: 2022

B.S. in Computer Science + BEM

(Business, Economics, and Management)

COURSEWORK

UNDERGRADUATE

Network Economics

Option Pricing Theory

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

AWARDS

RESEARCH

• 2020 Hummel-Gray Travel Fund award

• 2020 Housner Student Discovery Fund recipient

• Gee Family Poster Competition Finalist

ACADEMICS

• Jack E. Froehlich Memorial Award (awarded to a Caltech junior in the upper 5 percent of class, who shows outstanding promise for a creative professional career)

• 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 •

• PyTorch • TensorFlow • sklearn •

• NumPy • Apache Beam • GCP •

LINKS

[in linkedin.com/in/jma18](https://www.linkedin.com/in/jma18)

github.com/18jeffreyma

EXPERIENCE

CITADEL | QUANTITATIVE DEVELOPER INTERN

📅 Summer 2021

📍 New York, NY

- Working on the Electronic Trading Team under Global Fixed Income (GFI).

NURO | SOFTWARE ENGINEERING INTERN

📅 Spring 2021

📍 Mountain View, CA

- Worked with the ML Infrastructure team on model optimization and deployment at Nuro, a Series C startup focusing on self-driving goods delivery.

CALTECH | UNDERGRADUATE RESEARCHER

📅 Aug. 2020 – Present

📍 Pasadena, CA

- Undergraduate researcher under Prof. Anandkumar at the Tensor Lab, developing competitive optimization methods to train robust agents for multi-agent reinforcement learning environments. Work under review at NeurIPS 2021.

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 CS24 Head TA for Fall 2020 and 2021. Worked as a teaching assistant for both CS24 (Computing Systems, Fall 2019, Fall 2020) and CS2 (Data Structures, Winter 2020, Winter 2021). Responsibilities include developing assignments, grading, and holding weekly office hours.

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 to the 2020 IEEE International Symposium on Biomedical Imaging (ISBI'20).

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](https://doi.org/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](https://doi.org/10.2196/13810))

Published to the Journal of Medical Internet Research (JMIR).

OTHER INTERESTS

CALTECH ADMISSIONS AMBASSADOR AND FROSH CAMP COUNSELOR – selected by the Admissions and Deans' Offices to lead campus tours and organize freshmen orientation.