

Maya Josyula

🏠 mayajosyula.github.io [in maya-josyula](https://www.linkedin.com/in/maya-josyula) [🐙 mayajosyula](https://github.com/mayajosyula)

Education

University of California, San Diego, M.S. in Computer Science 2019 – March 2021
California Institute of Technology, B.S. in Mathematics, minor in Computer Science 2015 – 2019

Work and Research Experience

Graduate Research Assistant, UC San Diego Summer 2020 – Present

- Working on the design of algorithms for boosting with noisy data
- Analyzing accuracy and efficiency of smooth boosting and branching program boosting frameworks for noiseless and noisy sample distributions

Teaching Assistant, UC San Diego Fall 2019, Winter 2020, Spring 2020, Fall 2020, Winter 2021

- TA for undergraduate class of 200-500 students on Design and Analysis of Algorithms (CSE 101)
- Member of instructional team (10-15 strong) of undergraduate tutors, graduate TAs, and professors

Summer Undergraduate Research Fellow, Caltech Summer 2018

- Applied group theory concepts to help define and analyze voting systems, and to characterize the smallest number of voters needed to force a result

Undergraduate Research Assistant, Caltech Spring 2018

- Implemented an acceleration framework for convex program solvers with another student
- Tested acceleration framework on large datasets using Amazon Web Services (AWS)
- Evaluated performance of framework against existing convex solvers and measured relative error and speedup

Summer Research Intern, Mitsubishi Electric, Information Technology R&D Center, Japan Summer 2017

- Developed Octave program to simulate crowd movement using a computational fluid dynamics model
- Added functionality to CFD model allowing crowd movement around roadblocks and crowd entry/exit
- Tested model against camera data of crowd movement

Summer Intern, Army High Performance Computing Research Center, Stanford Summer 2016

- Developed geometrical models of upper lung structures for studying effects of aerosol exposure
- Simulated lung airflow and particle deposition in humans and rhesus monkeys using computational fluid dynamics, compared simulations between species and with theoretical approximations

Skills

Computer Languages: Python, C/C++, Java, MATLAB/Octave, JavaScript, OCaml, Go

Computer Skills: Unix, \LaTeX , HTML/CSS, Git, AWS, Microsoft Office

Publications

Equitable Voting Rules. Bartholdi, L., Hann-Caruthers, W., **Josyula, M.**, Tamuz, O., Yariv, L. *Econometrica* (forthcoming), presented at 2019 ACM Conference on Economics and Computation. [arXiv:1811.01227](https://arxiv.org/abs/1811.01227)

Outreach Activities

Grader, Art of Problem Solving Online School (Prealgebra, Algebra, Geometry) 2017 – 2019

Clarinet Choir Member, Caltech (Gave free concerts at public libraries for wider community) 2016 – 2019

Science Olympiad Volunteer, Caltech (Test monitor and judge for regional and state competitions) 2016 – 2018

Foreign Languages: Japanese (intermediate proficiency), French (intermediate proficiency)

Accolades: Larson Scholar (Caltech SURF), Perpall SURF Speaking Competition Semifinalist, National Merit Scholar, U.S. Presidential Scholar Semifinalist, National AP Scholar