Alexander Mehta

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EDUCATION

Fremont High School, Sunnyvale, CA 2020 — 2024
UW GPA: 4.0
Relevant Coursework: AP CS A, AP Calculus BC, AP Physics C: Mech, CS1A, CS1B, CS30C
Academic Awards: Gold Presidential Volunteer Service Award, Honor Roll

EXPERIENCE

Project: Empower Remote
President May 2022 - Present

- Built 501(c)3 non-profit from the ground up with 2000+ active community members and 150+ volunteers
- Developed chapter system to 60+ chapters spanning 10 countries
- Lead developer on Illuminate, accumulating 250k active users and 3.3M total views
- Hosted Empower Hacks, a hackathon with $112k in sponsorships and 600 attendees

BU Signal Transformation and Information Representation Group Boston, MA
Research Intern June 2023 - Present

- Developed methods of peak resolution for Particle Beam Microscopes, which allowed for less bias than state-of-the-art methods with similar RMSE
- Developed framework for analysis of convergence algorithms such as ADMM for PnP Priors

Theia Project Sunnyvale, CA
Principal Investigator August 2023 - Present

- Built a novel blind assistive device that was tested on 15+ participants
- Wrote paper outlining device study and open-source assembly instructions.
- Won Silicon Valley Science Fair Category Award (1st), California State Science Fair (2nd), Northern California JSHS Engineering Category (1st)

SELECTED PUBLICATIONS

- Mehta, A. & Yang, W., 2023 NAC-TCN: Temporal Convolutional Networks with Causal Dilated Neighborhood Attention for Emotion Understanding. 7th International Conference on Vision and Image Processing (Early Acceptance).
- Mehta, A. & Jalisatgi, R., 2023. Help the Blind See: Assistance for the Visually Impaired through Augmented Acoustic Simulation. ArXiv:2303.13536 (Principal Investigator, Active Work).
- Mehta A., Kitichotkul R., Choudhary V., Agarwal A., & Goyal V., 2023. Resolving Voltage Peaks in Particle Beam Microscopy. BU RISE Poster Symposium. Boston University, MA (Poster).
- Mehta, A., A Survey of Self-Driving Car Deep Learning Algorithms. Science Youth (Published).

EXTRACURRICULARS

Fremont Future Business Leaders of America *VP of Operations*

- Grew club from 30 to 110 members through club remarketing and advertisement
- Led SEED program to provide business development skills to middle schoolers at Sunnyvale and Columbia Middle Schools

Programming Club *Co-President*

- Increased club membership from 15 to 30 members in the first month as co-president
- Introduced a new club structure that has allowed 20 students to work on team projects together and 10 students to learn Java

SKILLS/INTERESTS

Skills – LaTeX, Pytorch, Python, Java, Linux (RHEL, Debian derivatives), Git, CI/CD, SQL, Spring Boot
Interests – Archery, High Performance Machine Learning, Entrepreneurship, Assistive Technology