Nathan Yao

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EDUCATION

Carnegie Mellon University   **Pittsburgh, PA**
Current GPA: N/A
Related Coursework: Imperative Programming (15-122), Concepts of Math (21-127), Matrices and Linear Transformations (21-241), Putnam Seminar (21-295), Reason Passion and Cognition (88-120)

SKILLS

Languages: Python, C, C++, Javascript, Typescript, SQL, Scheme, HTML, CSS, SML

Libraries: Pandas, Numpy, Cv2, Tensorflow, PyMongo, Scikit-learn, Seaborn, React.js, Node.js, Next.js, LangChain, FastAPI

WORK EXPERIENCE

Bay Area Rapid Transit (BART)   **Oakland, CA**
Software Engineering Intern   June 2022 – Aug 2022
- Developed a scheduling and event dashboard by integrating 11 APIs, enhancing information aggregation and operational efficiency for the mechanical engineering team.
- Designed a real-time display system, improving data visualization and accessibility over an 8-week period.

CompassPoint Mentorship   **Alviso, CA**
Software Engineering Intern and Teaching Assistant   2022 – 2024
- Architected and developed the Alviso Environmental Monitoring Dashboard, a comprehensive system for tracking environmental parameters.
- Implemented air pollution and noise monitoring systems using SparkFun hardware, Raspberry Pi, and Python.
- Developed a Python-based RESTful data server utilizing Azure Cloud services for efficient data management.
- Instructed students in kayaking, woodworking, and other subjects as a Teaching Assistant during summer camps.

Ume Tea   **Mountain View, CA**
Barista   2023 – 2024

RESEARCH

Book: Sky High - A Photograph History of the Flying Tigers and the Black Cat Squadron   **Sunnyvale, CA**
Researcher and Co-Author: June 2022 – Aug 2024
- Researched the history of the Flying Tigers with Dr. Lin at Stanford University. Presented findings at Fu Jen Catholic University.

A Magnetopause Model for Sizing Artificial Magnetospheres at Mars and Lagrange-1 Orbits   **Sunnyvale, CA**
Co-Author: June 2022 – Oct 2023
- Presented research findings at the ASCEND Conference in Las Vegas, Oct 23-25, 2023.

LEADERSHIP

Tahoma Hack   **San Jose, CA**
Lead organizer: Jan 2023 – Aug 2023
- Organized a water-themed Hackathon at Summit Public Schools: Tahoma, securing $1,500 in grants from Hack Club and Valley Water District. Attracted over 100 participants to develop innovative solutions addressing water conservation and sustainability.
- Collaborated with sponsors and partners to provide mentorship, resources, and prizes aligned with the water theme.

Gamify Fire Safety Education   **Sunnyvale, CA**
Lead organizer and developer   Jun 2023 - Aug 2024
- Developed an educational iOS game on fire safety for high school students using Unity, in collaboration with the San Jose Firefighter Foundation.

Mural Projects for Santa Clara County Parks: Environmental Education   **San Jose, CA**
Lead organizer: 2023 – 2024
- Coordinated the installation of environmental education murals at Hellyer Park, Ed Levin Park, Stevens Creek Park, and Alviso Marina over two summers.
- Secured grants from Valley Water, GreenWaste, Santa Clara County Supervisor Lee.

AWARD

- United States of America Computing Olympiad (USACO) Gold   2023
- Gold Presidential Volunteer Service Award   2021