JEFFREY TSENG

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Purdue University

PROFESSIONAL SUMMARY

First-year Computer Science and Mathematics student at Purdue with research experience in radar imaging, bioinformatics, and autonomous systems seeking a 2026 software engineering internship.

EDUCATION

Purdue University, West Lafayette, IN — Graduation: May 2029
Bachelor of Science in Computer Science and Mathematics — GPA: 4.0/4.0
Relevant Classes: CS390: Web Applications Programming, CS193: Computer Science Tools, CS180: Problem Solving & Object-Oriented Programming, MA261: Multivariable Calculus

RELEVANT EXPERIENCE

MIT Beaver Works — Cambridge, MA
Student — July 2024 – August 2024

- Developed Synthetic Aperture Radar (SAR) applications in collaboration with MIT Lincoln Labs and the Department of Defense to identify foreign objects through foliage
- Developed radar imaging back-projection algorithms in Python and C++ using NumPy, SciPy, and Matlab to process radar data and generate images, processing radar data enabling high-resolution images of 2.6 in. soda cans across 10 by 10 meters
- Built an F550 Hexacopter, with a PulsOn 440 radar with a Raspberry Pi via socket programming for real-time data transmission

Idiopathic Pulmonary Fibrosis Research — Stanford University, CA
Researcher — June 2023 – October 2023

- Performed bulk and single-cell RNA sequencing after extensive training in R, applying data science to biological research
- Conducted wet lab experiments on human lung fibroblasts, focusing on Idiopathic Pulmonary Fibrosis and the effect of pirfenidone on serum-stimulated human lung fibroblasts
- Gained hands-on experience in DNA/RNA isolation, PCR, and ELISA, developing a strong foundation in molecular biology
- Collaborated with Stanford researchers to explore biological findings and contribute to ongoing research on pulmonary diseases

UC Berkeley Robot Open Autonomous Racing Program — Berkeley, CA
Competitor and Alumni — July 2022 – December 2022

- Engineered and integrated ROS-based communication channels, designing interfaces between perception, decision-making, and control modules to streamline autonomous vehicle functionality in real-world conditions
- Designed and tested autonomous vehicle simulations in Gazebo, leveraging machine learning models and applying mathematical concepts such as matrix operations, probabilistic models, and gradient descent to optimize path planning
- Collaborated with UC Berkeley professors to develop Python, machine learning, and advanced control algorithms

LEADERSHIP AND EXTRACURRICULARS

604 Robotics — San Jose, CA
Member — September 2022 – Present

- Placed 5th globally, playing a pivotal role in selecting alliance partners, including at the FIRST FRC World Championships
- Collaborated on data-driven decision making, refining competition data by examining specific statistics of teams throughout each of their matches to identify trends in strategy and compatibility
- Analyzed and scouted hundreds of matches during tournaments, parsing data to optimize alliance partner selection

Leland High School Student Body President — San Jose, CA
School President — September 2021– May 2025

- Allocated $170,000+ across 68 events, sports, school store, and leadership, ensuring a smooth school year with suitable events
- Represented the student body, working with district superintendents and school administration, attending school district meetings to voice concerns and enact policies

TECHNICAL SKILLS

Languages: Python, Java, HTML, CSS, C++, C
Libraries and Tools: NumPy, SciPy, Matlab, Gazebo, ROS

See more of what I can do at jtseng.org
References Available Upon Request