Tam (Jimmy) Tran

LinkedIn: www.linkedin.com/in/tam-jimmy-tran
Portfolio: https://jt7347.github.io/
Email: jimmytatr21@gmail.com
Phone: (+1) 781-952-4668
[U.S. CItizen]

EDUCATION & ACADEMICS

- Princeton University — Class of 2025
  - B.S.E. Candidate, Mechanical and Aerospace Engineering, GPA: (3.55)
  - Certificate in Robotics and Intelligent Systems
- Relevant coursework:
  - Engineering Dynamics, Engineering Design, Mechanical Design, Differential Equations, Thermodynamics, Mechanics of Solids, Fluid Dynamics, Fundamentals of Materials Science, Automatic Control Systems, Space Flight

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WORK EXPERIENCE

Undergraduate Researcher - Intelligent Robot Motion Lab — January 2023 - Present

- Successfully built a hardware research platform (AgIRoM) for agile vision-based autonomous flight based on UZH Robotics and Perception Group's Agilicious Platform
  - Platform integrates visual-inertial odometry with depth camera mapping to provide state estimation and localization to onboard Jetson Orin NX computer
- Working in a team to develop a real-time navigation policy for autonomous flight in unknown changing environments
- *Interned Full-Time during Summer 2023*

Assistant Workshop Engineer - Summer Intern, Seagull Models — Summer 2022

- Aided in assembling test planes and various component shipment orders for further testing by the pilot technicians
  - Gained experience working with hand tools, RC electronics, and CAD software

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EXTRA-CURRICULAR ACTIVITIES AND PROJECTS

Drone Team Lead, Princeton Robotics Club — September 2021 – Present

- Led a small team that successfully designed and built a modular autonomous vision-based quadcopter platform
  - Able to detect 'hand gestures' picked up by an onboard camera and interpret them as commands, such as taking off.
- The platform was built using PX4 Autopilot (open-source flight controller firmware), Raspberry Pi, OpenCV algorithms, designing and 3D printing various hardware mounts, and integrating optical flow and LiDAR sensors into the state estimation pipeline

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SKILLS & PERSONAL INTEREST

- Relevant Skills:
  - *Computer skills: Python, MATLAB, Simulink, ROS, Linux, PTC Creo, Fusion360*
  - *Electronics: Soldering, Flight Controllers (Betaflight, PX4), Raspberry Pi, Jetson Orin NX*
  - *Rapid prototyping: Laser cutting, 3D printing*
- Interpersonal:
  - *Active Listener, Adaptable, Leadership, Proactive*
- Languages:
  - *English (fluent/native), Vietnamese (fluent/heritage), Mandarin (intermediate)*
- Personal Interests:
  - *Princeton Men's Division Ultimate Frisbee, Rock Climbing*