

Taran Govindu

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EDUCATION

Georgia Institute of Technology

Expected Graduation May 2028

Bachelor of Science in Aerospace Engineering

4.0 GPA

- Relevant Coursework: Statics, Engineering Materials, MATLAB, CAD, Physics: E&M, Physics: Mechanics
- Online Coursework: CornellX ENGR2000X – Introduction to Engineering Simulations
 - Learned to define, set up, and analyze CFD and FEA simulations in Ansys Fluent and Mechanical

EXPERIENCE

Propulsion Feed System & Simulation Engineer

Jan 2026 – Present

Propulsive Landers

Atlanta, GA

- Designing a custom servo-actuated ball valve in SolidWorks for the propulsion feed system (PFS), reducing total PFS mass by ~10% while enabling finer regulation of nitrogen flow and meeting rocket launch mass constraints
- Sized propulsion feed system components under a 5.5 lb mass budget by calculating pressure and flow requirements for regulators, burst disks, and valves; evaluated 10+ candidate components per subsystem and built MATLAB scripts to automate sizing equations, streamlining part selection and constraint verification
- Accomplished a ~30% increase in simulation fidelity by implementing a 6-DOF aerodynamic force model in Rust that integrates stochastic wind disturbances with lookup tables to resolve non-centered aerodynamic moments

Undergraduate Research Assistant

Jan 2026 – Present

Space Systems Design Lab (SSDL)

Atlanta, GA

- Recreated and analyzed molecular dynamics trajectories in OVITO to distinguish between in-situ and exotic formation pathways of nanophase iron, providing a 3D spatial diagnostic for lunar impact processes
- Reproduced baseline crater-impact simulations with 600k+ atom targets on the PACE Phoenix HPC cluster, validating shock dissipation and thermal reduction outputs against established datasets
- Evaluating implementation of MACE machine learning interatomic potentials for faster MD experimentation, aiming to reduce computational overhead by replacing traditional ReaxFF while preserving accuracy

Engineer & Co-Founder

Sep 2025 – Present

FluxSpace

Atlanta, GA

- Engineering a full-stack autonomous drone prototype, transitioning from a Python/PX4/Gazebo virtual testbed to a physical airframe designed in CAD with GD&T and DFM considerations; reduced early development risk by validating path-planning algorithms in simulation prior to hardware integration
- Validated system requirements for autonomous indoor mapping by conducting 30+ customer discovery interviews with construction and facilities teams, identifying pain points that shape drone's sensor suite and analysis software
- Secured \$5,000 in CREATE-X funding and ranked in the top ~10% of Y Combinator Winter 2026 applicants (out of 20,000+) for the technical viability and market potential of an autonomous structural inspection platform

PROJECTS

Conservation Drone Lead Engineer

Oct 2024 – May 2025

- Led a team in building a drone from scratch by teaching CAD (Fusion 360/SolidWorks), aerodynamics, electronics (soldering), manufacturing (3D printing), and assembly, resulting in a functional conservation multirotor drone
- Improved system reliability by integrating custom-designed components with flight hardware, and configuring flight controller with ExpressLRS, ensuring stable and repeatable performance

Exascale CFD VIP @ Georgia Tech

Jan 2026 – Present

- Engineered a multi-scheme Burgers' equation solver in Python and C++, enabling performance comparison between Godunov and Lax-Wendroff schemes in a unified executable supporting modular integration of new schemes
- Simulated canonical flow phenomena (Gaussian, N-wave) to evaluate numerical stability across viscosities and built a Python visualization tool to compare solution evolution; currently extending the Godunov solver from 1D to 2D

SKILLS

Programming: Python, Rust, C++, MATLAB, Java, Bash

Simulation & CAD: SolidWorks (GD&T/DFM), CATIA, Fusion 360, Ansys (Fluent/Mechanical), OVITO

Robotics & Controls: PX4 Autopilot, ExpressLRS, 6-DOF Modeling, Gazebo, PID Control

Infrastructure & Tools: Soldering, 3D Printing, Multimeters, Linux (Ubuntu), PACE HPC