ADARSH SHETH

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OBJECTIVE

Aerospace Engineering rising junior with hands-on experience in CAD, modeling, mission analysis, and systems integration, seeking a Summer 2026 internship to apply these skills in real-world engineering projects, contribute to innovative aerospace solutions, and further develop expertise in multidisciplinary collaboration, advanced system design, and aerospace technologies.

EDUCATION

Texas A&M University, College Station, Texas — Expected May 2028

Bachelor of Science in Aerospace Engineering, Minor in Computer Science | Dean's List Spring 2025

- Coursework: Thermodynamics, Aerodynamics, Aircraft Performance, Orbital Mechanics, Mechanics (Statics, Dynamics), Analytical Methods, Physics E&M, Multivariable Calculus, Differential Equations, Linear Algebra, Chemistry Lab, C++, Python.
- Leadership: 12-member team lead for Lunar Search & Rescue challenge at TAMU SEDS; hosted by Space Teams University.

ACTIVITIES

Aerodynamics Engineer — Sep 2025 - Present

TAMU Vertical Flight Design (VFD) | Design-Build-Vertical Fly Competition | College Station, TX

- Programmed Monte Carlo optimization algorithm to generate 1000 flight paths under min. points and max. flight time constraints.
- Analyzed quadcopter simulation data to determine power at translation and hover states as a function of mass.
- Researched VTOL configurations, primarily multi-rotor, to maximize static stability and dynamic response during hover state.

Vertical Flight Society Project, 1st Place — Nov 2025

Aggies Ignite Challenge | College Station, TX

- Designed S&R eVTOL to drop 5lb rescue package at 10,000ft under 20-40 knot winds, 500 ft cloud cover, and 50% fog visibility.
- Utilized constraint analysis iterative sizing method to optimize MTOW, planform area, lift propeller area, and lift rotor fraction from 2,362,692 generated configurations. Derived propeller radius, pitch, and tip speed; motor torque; shaft RPM; and T/W ratio.

Fluid Systems Engineer — Feb 2025 – Jan 2026

TAMU Rocket Engine Design (RED) | College Station, TX

- Conducted N2O leak/pressure test (P&ID, procedure), failure mode and effects analysis (FMEA), created fluid systems assembly diagram, 11' tank machining approach, V&V, and presented at PDR and CDR for Elysium 2.0, a liquid bi-propellent engine.
- Implemented new BoM sheet with automated itinerary, cost authentication, and part override for physical and financial record.

Robotics Team Co-Founder and Captain, Upper Cabinet Secretary — Mar 2022 - Jun 2024

Dougherty Valley Robotics Club | San Ramon, CA

- Won 8 awards, 4 state and national qualifications, and 2 world championship qualifications; ranked in top 2% of 20,000 teams.
- Established chain of command, project management and engineering design process workflow, and secured $9,000 in funding.
- Oversaw CAD modeling, T&E, structural optimization, systems integration, and documentation; C++ autonomous routing, PID.
- Authored 1 technical, 1 management, and 2 program operational guides; Designer of *dvhsrobotics.com 2023.*

PROJECTS

- **Common Item Engineering** Series and **Aircraft Infographic 2.0** *(Q3-Q4 2025)***:** Technical research and compilation of infographics which dive into structural, electrical, or thermodynamic designs/processes of everyday items; posted on tx.ag/adarsh.
- **Aggies INVENT** *(Mar 2025)*: Engineered, prototyped, and presented honeycomb plate-type SMR to maximize heat transfer.
- **IGNITE Design Challenge** *(Dec 2024)*: worked in team to research rocket aerodynamics (fins, canards), produce CAD, run FEA for validation, conduct propulsion and drag calculations, code Python landing simulation, and presented design. Scored 284/300.
- **Robotic Launcher Optimization** *(2024)*: Determined 14 launch mechanism factors for optimization of catapults and slappers.
- **Boeing 737-800** *(2021)*, **5776K States** *(2024)* **CAD Models:** Constructed in Fusion 360, complete with joints and motion.
- **Eagle Project CAD** *(2021)*: designed and created assembly manual of 14'x4'x3' and ~400lb load-bearing greenhouse bench for Fertile Groundworks & local food pantries; secured $850 value donation in redwood lumber.

SKILLS

Technical: CAD (Fusion 360, SolidWorks), C++, Python, MATLAB, Git, Robotics, Motors, Sensors, Pneumatics, Control Systems, Prototyping, Assembly Diagrams, Systems Integration, Trade Studies, Test & Data Analysis, Propulsion, Technical Report.
Professional: Leadership, Collaboration, Project Management, Critical Thinking, Design Reviews, Logistics, Creative Thinking.
Productivity: Excel, Notion, Trello, MS Office, Adobe, Miro. **Languages:** English (native), Gujarati (native), Spanish (classroom).

AWARDS / INTERESTS

Awards: 1st Place Aggies Ignite, VEX World Championship 2023 & 2024, Eagle Scout & 4 Palms, 3X PVSA, CSF.
Interests: Hiking, Photography & Photo Editing, Travel, Philosophy/Ethics, Field Robotics, Catan, Baking, Origami, Digital Design.
Portfolio (Website): tx.ag/adarsh, **Project Files (Drive):** bit.ly/adarsh-projects.