Cade Gossett

US Citizen | Houston, TX | (832) 755-2520 | cadegossett1@gmail.com | website: cadegossett1.github.io

Driven mechanical design engineer with experience in electronics passionate about robotics, landers, rockets, aircraft, and collaborative problem solving. Seeking to prototype and integrate hardware, both mechanical and electrical, into tomorrow's space systems.

EDUCATION

Texas A&M University

Master of Engineering in Mechanical Engineering   *Aug 2025 - Dec 2026*
- *Notable courses: Mechatronics and microcontrollers*

Texas A&M University   *GPA: 3.58*

Bachelor of Science in Aerospace Engineering   *Aug 2021 - May 2025*
- *Awarded **Wings Over Houston Scholarship** (2024-2025)*
- *Received **Dean's Honor Roll Award** (Fall 2024) for Outstanding Academic Achievement*
- *Received **Distinguished Student Award** (Spring 2023) for Outstanding Academic Achievement*

Certifications:
- CNC Machining and CAM - America's Cutting Edge (ACE)   *Aug 2025*
- CNC Mill & Lathe Operator - HAAS   *Aug 2025*
- Educational Robotics Training - Universal Robotics   *Jul 2025*

PROFESSIONAL EXPERIENCE

Robotics and Automation Design Lab   *Texas A&M Engineering Experiment Station*

Graduate Research Assistant   *Aug 2025 - Dec 2025*
- Designed a test bed for a 7 axis, 14kg payload, cobot ensuring design matches manufacturer requirements
- Designed an adapter to mount an industry partner's gearbox onto the end effector of said cobot

Undergraduate Research Intern   *May 2025 - Aug 2025*
- Designed and prototyped a **3D printed** end effector handle with **Solidworks** for a strength amplification robot, integrating a new force-torque sensor for improved noise reduction
- Designed and soldered a compact wiring harness with pull-up resistor logic for a multi-button interface, routing to the robot's end effector power and data connector

Spaced Out Media

Co-Founder, Media Producer   *Dec 2021-Present*
- Co-founded and operate a photography/video company focused on commercial advertising
- Developed all **Standard Operating Procedures (SOPs)** to streamline workflow with consistent quality
- Designed project management spreadsheet to automate tasks and reduce communication necessary

PROJECT EXPERIENCE

Six DOF Robotic Arm

Independent Project   *Aug 2025 - Present*
- Constructed a 6-DOF robotic arm inspired by the UR3 Cobot with stepper motors, 3D printed actuators, and ROS 2 (Humble) for control

Lunar Lander Design Capstone   *Texas A&M University*

Project Manager   *Aug 2024 - May 2025*
- Designed a reusable LOx Hydrogen lunar lander for a 4 person crew, compatible with NASA HLS system architecture
- Conducted 1/6th scale model drop tests using lunar regolith simulant to validate Apollo-era stability requirements
- Reduced Apollo Lunar Module dry mass by 15% using modern composites and avionics

<u>Bioastronautics and Human Performance Lab</u> *Texas A&M University*

Undergraduate Research Assistant *Jan 2025 - May 2025*

- Participated in research into improving psychological health for astronauts during long-duration spaceflight using an **Unreal Engine** virtual reality nature environment with multimodal sensory stimulation (olfactory, thermal, wind)
- Implemented rock skipping mechanics and improved user throwing mechanics within VR environment

<u>Society of Sonic Flight Engineers</u> *Texas A&M University*

Structural Engineer *Aug 2023 - Jan 2025*

- Designed and built the horizontal tail for a high speed RC aircraft in **Solidworks** using **laser cut** balsa
- Verified performance requirements within a 100 mph flight regime

SKILLS & INTERESTS

Software Skills: SolidWorks, Python, C++ (basic), Arduino IDE, Excel, Unreal Engine
Prototyping & Fabrication: CNC Mill, CNC Lathe, 3D Printing, Laser Cutting
Embedded & Robotic Systems: Soldering, Breadboard Prototyping, PCB Design, Sensor Calibration/Testing
Personal Interests: Running, Astrophotography, Camping, Reading, Guitar