

Annie Y. Wang

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Education

Texas A&M University | College Station, TX

May 2029

Bachelor of Science in Electrical Engineering; Minors in Mathematics & Meteorology

GPA: 3.82

- Craig and Galen Brown Engineering Honors
- Relevant Coursework: Digital Systems Design, Program Design & Concepts (C++), Engineering Computation (Python), Physics Mechanics, Physics E&M, Differential Equations, Calculus I - III

Experience

AggieSat Laboratory

College Station, TX

ADAM (next-gen mechanical counterpressure EVA glove) EPS (Electrical Power Subsystem) Engineer

Jan 2026 – Present

- Developed a parameterized Python RF link budget calculator (BLE, ANT+, Zigbee) that computes signal-to-noise ratio from transmit power, path loss, and antenna gain, against ADAM's data and power constraints for a protocol feasibility summary.
- Built an Altium component library of 15+ candidate EPS components including schematic symbols, PCB footprints, and parameters, cutting future team schematic capture time and standardizing part selection across the 6-member EPS subteam.
- Conducted trade studies across 4 EPS design areas (power source, power regulation topology, actuator drive electronics, sensor selection), evaluating candidate architectures against subsystem criteria to inform preliminary power system design.

Shen Lab

College Station, TX

Undergraduate Research Assistant

Jan 2026 – Present

- Benchmarked ESM2 protein language models across 200+ protein variant datasets on TAMU's HPRC clusters, evaluating predictive accuracy using Spearman correlation to identify performance gaps across 5 protein property categories.
- Reduced failed reproduction attempts by 33% across lab members through refactoring hardcoded paths and parameters into configuration-driven workflows, enabling scalable execution across shared HPRC computing environments.
- Cross-validated model results with a 5-person research team using Git branch workflows, independently reproducing teammates' Spearman correlation outputs to confirm pipeline consistency across shared HPRC environments.

Projects

LED Sequencer PCB | Altium, LTspice

Jun 2026

- Designed a 10-LED sequencer circuit using a 555 timer in astable configuration to clock a CD4017 decade counter, selecting RC timing values to set oscillator frequency with a potentiometer for user-adjustable sequencing speed
- Verified oscillator frequency and circuit behavior in LTspice before layout to validate timing before committing to hardware
- Captured schematic and completed a two-layer PCB layout in Altium Designer, including footprint selection, silkscreen labeling, and trace routing for all 10 LED/resistor channels, resolving DRC errors to produce a manufacturable board.

Robodog | Onshape, C/C++, Arduino Uno, Soldering

Jan 2026

- Engineered a human-following robot in C++ on Arduino Uno that maintained a 4 cm following distance within ± 1 cm accuracy using HC-SR04 ultrasonic sensing and dual DC motor PID control via an L298N driver.
- Iterated through 3 hardware prototypes, hand-soldering revised circuit connections to resolve ultrasonic sensor detection failures, diagnosing signal timing issues and adjusting circuit connections to achieve consistent distance measurement.
- Designed wheel assemblies in Onshape across 2 iterations, resolving drivetrain friction to achieve full wheel articulation.

Reveille After Hours | JavaScript, HTML/CSS, Figma

Oct 2025

- Led a 4-person team at HowdyHack to build a fully playable browser-based escape room game with multi-stage progression.
- Engineered real-time collision detection and projectile motion for item pickup, drop, and throw mechanics across 5 stages.

Extracurriculars

SASE (Society of Asian Scientists and Engineers)

College Station, TX

Collegiate Committee Intern

Sep 2025 – May 2026

- Coordinated 4 events for 75+ attendees with a 15-member committee, managing logistics and driving participation growth.
- Contributed 40+ volunteer hours and raised \$680+ through fundraising and service initiatives supporting chapter activities

Skills

Programming: C/C++, Python, Java, Linux, Bash, R, HTML/CSS, JavaScript

Software: Altium, LTSpice, Onshape, SolidWorks, Git/GitHub