Lohen Chen

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Education

Purdue University — West Lafayette, IN
Bachelor of Science in Computer Engineering — *Expected Graduation May 2030*

- Relevant Coursework: CS 159 – Introduction to Programming

Experience

Full Swing Golf — San Diego, CA
Research & Development Intern — *Jun 2024 – Aug 2024*

- Developed a mini-golf game prototype using Unity Engine, C# scripting, and the Unity Test Framework for commercial golf simulator product line; presented final product directly to the COO
- Updated sensor API backend to support new calculation methods for radar-and-camera-based golf ball trajectory tracking, and built Python automation tools for internal testing and validation of simulator physics

Leadership & Service

Aerospace Club, Canyon Crest Academy — San Diego, CA
President (formerly Project Manager) — *Jul 2022 – Present*

- Revitalized a declining club by authoring a strategic whitepaper outlining recruitment reform, meeting consistency, and event prioritization; grew membership from 7 to a record 28 members despite a smaller incoming class
- Founded the Student Unmanned Aerial Systems (SUAS) Competition team, and led teams for NASA Cubesat radio communication systems and the Space Settlement Design Competition

Civil Air Patrol – U.S. Air Force Auxiliary — CA/OR Wings
Cadet Staff Sergeant | Aerospace Ed. NCO | Logistics NCO — *Sep 2023 – Present*

- Delivered monthly aerospace education lessons on flight physics, orbital mechanics, and engineering concepts; served as Logistics NCO at CA Wing Encampment 2024, leading a 12-person team over a 12-day operation in 110°F heat; co-founded squadron's first CyberPatriot team and co-coached it to Platinum tier (top 30%) in its debut year

Projects

Pocket Game Console | *STM32, C, SPI, PWM/ADC, Altium* — Jun 2026 – Present

- Collaborated on a 5-person team at Purdue Space Program to design and build a custom STM32-based handheld gaming console, owning firmware development while contributing to PCB layout in Altium
- Architected a layered embedded firmware stack (HAL, Driver, Middleware, Application) in C, separating hardware drivers from game logic
- Developed an SPI-driven accelerometer interface for tilt-based game controls
- Built an LED matrix display driver with Bresenham-based graphics rasterization, PWM/ADC-driven brightness and volume control, and a finite state machine governing menu, gameplay, and game-over flow

Power Supply PCB | *Georgia Tech Processing Systems Lab*

- Redesigned and upgraded a power supply PCB for an active research lab as part of an engineering capstone project, reading real-world circuit schematics, soldering components, and validating board performance

High-Altitude Balloon Sensor Suite | *Aerospace Club*

- Led a 5-person team to design and build a sensor payload for a high-altitude balloon, including telemetry data-visualization software, while managing project timeline, task delegation, and integration testing

Technical Skills

Programming: C, C#, Unity, JavaScript, Python, Git, Jira, Plastic SCM
Engineering: STM32, Altium, Onshape CAD, KiCad, Inkscape, Embedded Systems
Fabrication: Soldering, Circuit Prototyping, 3D Printing