Junzhe (Calvin) Yang

calviny7@uci.edu | https://www.linkedin.com/in/calvinyang07/
https://github.com/SomeHeresy | https://someheresy.github.io/

EDUCATION

University of California, Irvine Irvine, CA
Bachelor of Science, Computer Science and Engineering *Expected Jun. 2030*
GPA: 4.00/4.00

SKILLS

Programming Languages: Java, Python, C/C++, JavaScript, HTML/CSS
Software: ANSYS Maxwell, Fusion 360, VS Code, EasyEDA, OpenRocket, NumPy, pytest, Git, GitHub Actions, CapCut, Microsoft Office, Adobe Photoshop, Claude, Codex

PROJECTS

Electromagnetic Accelerator Jun. 2022 – Present
Individual Project *Irvine, CA*

- Designed and built a two-stage coil gun, solving the challenge of precisely timing sequential electromagnetic coils to efficiently accelerate a projectile.
- Used ANSYS Maxwell 2D for electromagnetic field simulation and coil-timing optimization, Fusion 360 for mechanical design, 3D printing for fabrication, and Arduino for stage-control logic.
- Achieved approximately 11 m/s projectile velocity with a 54.64 g projectile using four 400 V, 330 µF capacitors.

Coilgun Timing Simulator Aug. 2026 – Sep. 2026
Individual Project *Irvine, CA*

- Built a Python coilgun simulator coupling circuit dynamics and projectile motion via position-dependent inductance, using a custom 4th-order Runge-Kutta solver.
- Validated against the analytical RLC solution; confirmed 4th-order convergence and energy conservation with a relative error of 6×10^{-14}.
- Automated 22 tests across 3 Python versions in GitHub Actions; quantified a 46.8% velocity loss to magnetic suckback and identified a projectile-placement change predicted to recover 37% of muzzle velocity.

Arduino Sensor & Control System Jun. 2026 – Jul. 2026
Individual Project *Irvine, CA*

- Built a real-time sensor monitoring system using an Arduino Uno R3, integrating an ultrasonic distance sensor and temperature/humidity sensor with an OLED display.
- Developed C++ firmware to read sensors, update an OLED display, and handle errors.
- Integrated digital sensor inputs and implemented I2C communication with the OLED display.

EXPERIENCE

UCI Master of Engineering Capstone Project Assistant Jan. 2025 – Jun. 2025
Gaudi Technology *Irvine, CA*

- Revised 3D CAD models in Fusion 360 for printable concrete structures.
- Assisted with fabrication and preparation of concrete molds used for ASTM material strength testing.
- Collaborated with 4 MoE student researchers during prototype development and testing.

ACTIVITIES & LEADERSHIP

YouTube (youtube.com/@SomeHeresyGaming) Jan. 2026 - Present
Content Creator *Irvine, CA*

- Built and grew a YouTube channel to 50,000+ subscribers and 150M+ total views.

American Rocketry Challenge Nov. 2025 - Mar. 2026
R&D and Simulation Lead *Irvine, CA*

- Improved simulated flight accuracy by 23.2% through iterative OpenRocket analysis.
- Collaborated with a 7-member engineering team to design and build a 25.6-inch competition rocket.
- Completed two competition qualification flights, achieving an official score of 139.8 total.