Shervin Shahidi

949-636-0570 | ShervinShahidi@ucla.edu | linkedin.com/in/shervinshahidi | github.com/Shervinssl

Education

University of California Los Angeles Expected May 2026

Bachelor of Science in Computer Science *Los Angeles, CA*

- **Related Courses:** Software Construction, Operating Systems Principles, Computer Systems Architecture, Algorithms and Complexity, Logic Design of Digital Systems, Advanced Circuit Theory, Analog Electronic Circuits

Irvine Valley College Jun 2022 – May 2024

Associate's in Computer Science — GPA: 4.00 *Irvine, CA*

Projects

Tower Defense Game — *Python, Pyglet, YAML, Object-Oriented Design* Summer 2025

- Developed a complete tower defense game engine from scratch using Object-Oriented Programming (OOP) principles, with reusable classes for towers, enemies, levels, and pathfinding logic.
- Implemented a grid-based collision and targeting system to manage unit movement, attack range detection, and tower placement in real time.
- Optimized performance by batching sprites and managing event loops within Pyglet's rendering pipeline, maintaining smooth 60 FPS gameplay.
- Integrated YAML-based configuration for levels and assets, streamlining iteration and enabling modular expansion.

UCLA Software Construction — *React, Django, Django REST Framework, Git* Winter 2025

- Led the design and development of the AllExercises platform as lead software engineer, managing both frontend and backend integration.
- Built a full-stack event coordination system using React and Django REST Framework with secure token-based authentication.
- Integrated automated event tagging to improve content organization and searchability across events.
- Collaborated with a 4-person team using Git for version control, enforcing code quality via reviews and sprint-based development.

Twisted Snake — *JavaScript, Three.js, HTML/CSS, Git* Fall 2024

- Developed a 3D reimagining of the classic Snake game featuring free 360-degree camera rotation, AI-driven enemies, and pointer-locked controls.
- Implemented dynamic lighting, collision detection, and camera mechanics using Three.js to deliver immersive gameplay.
- Introduced a shader-based material system and particle effects for enhanced visual feedback and realism.

UCLA Summer Hackathon — *React, JavaScript, Node.js, MQTT, MicroPython, Git* Summer 2024

- Built backend control and a web interface for an ESP32-based rover with ultrasonic sensors, live camera feed, and wireless navigation via Raspberry Pi.
- Designed and fabricated the rover chassis using laser-cut and 3D-printed components, and presented system design and integration to a judging panel.
- Implemented an MQTT-based messaging layer for low-latency telemetry and command exchange between hardware and dashboard.

UCLA Electrical Engineering Experience

Analog & Embedded Systems (Coursework + Independent Work) 2024 – Present

- Applied MOSFET and BJT small-signal concepts to analyze gain, biasing, and frequency response in basic amplifier circuits.
- Solved and modeled RC/RL/RLC circuits to understand transient and steady-state behavior.
- Built embedded systems with ESP32 using ultrasonic sensors, PWM motor control, and feedback loops.
- Completed beginner PCB design exercises in KiCad (schematic capture + simple routing).

Experience

President of the Computer Science Club Sep 2023 – May 2024

Irvine Valley College *Irvine, CA*

- Created and led coding exercises in C++ and Python, plus quizzes, tutorials, and career workshops, increasing the class grade average by 10%.
- Conducted 4 hours of live weekly sessions to reinforce classroom concepts and teach key software tools including HTML and CSS.
- Facilitated communication between 100 students and 2 professors, addressing concerns and clarifying expectations and requirements.

Technical Skills

Languages: Python, C/C++, SQL, JavaScript, HTML/CSS, X86 and RISCV-32 Assembly, Verilog, Bash, Shell Scripting

Frameworks & Tools: React, Node.js, Three.js, Django, WordPress, Git, Jupyter Notebook, Docker

Hardware: Oscilloscope, Multimeter, KiCad, Onshape (CAD), Raspberry Pi, Arduino