TORIN HAMILTON

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EDUCATION

University of California, Los Angeles   GPA: 3.2

B.S. Electrical Engineering   Mar 2025

Holyoke Community College   GPA: 4.0

A.S. Engineering Studies   May 2022

TECHNICAL SKILLS

Languages: Python, C++, Verilog

Software: MATLAB, SolidWorks, PSpice

PROJECTS

V.R.O.O.M. Maze Navigator

UCLA, Los Angeles, California | Senior Capstone Design Project | Sep 2024 – Mar 2025

- Collaborated within a 4-person team over 20 weeks to develop a game where the player navigates an RC car through a real-world maze with hidden walls.
- Designed and built the hardware stack for the Raspberry Pi-based Maze Navigator (car) incorporating IMU/camera sensors, motor drivers, and a custom RPi-GPIO controller.
- Implemented voice control (Python, OpenAI Whisper, difflib fuzzy matching) and contributed to PyQt5 GUI for visualization.
- Developed core robotic functions, including reliable 90° turning (BerryIMU gyroscope) and collaborated on OpenCV line detection for forward movement.

Autonomous Path-following Robot

UCLA, Los Angeles, California   Oct 2022 – Dec 2022

- Programmed a line-following robot in C++ (Arduino) using IR sensors for line detection.
- Implemented a PD control algorithm for real-time course correction and path tracking.

EXPERIENCE

Physics Supplemental Instructor

HCC, Holyoke, Massachusetts   Jan 2021 – May 2022

- Tutored 15+ undergraduate students individually and in small groups on core concepts in Mechanics and Electricity & Magnetism.
- Evaluated lab reports and quizzes, providing detailed, constructive feedback to 35 students to improve conceptual understanding and accuracy.