

Rick Unite

Electrical Computer Engineering student eager to contribute and grow through internship roles

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EDUCATION

California State Polytechnic University, Pomona

Aug '22 - (Expected) Jun '26

- **Major:** B.S Electrical Computer Engineering

RELEVANT COURSEWORK

ECE 2101 Electrical Circuit Analysis I, II & Lab | ECE 3301 Intro to Microcontrollers

- Applied circuit theory principles (Ohm's law, Thevenin/Norton equivalents, AC/DC analysis) to design and analyze resistive, capacitive, and inductive networks using lab instrumentation such as oscilloscopes and function generators.
- Programmed PIC microcontrollers in assembly and C to interface with LEDs, switches, and sensors, implementing real-time control and I/O operations.

ECE 2300/3300 Digital Logic Design Verilog & Lab | ECE 2200 Intro to Microelectronic Circuits

- Designed and implemented a Doodle Jump-style game on a Nexus A7 100T FPGA using Verilog in Vivado.
- Analyzed and designed basic analog circuits including diodes, BJTs, and MOSFET amplifiers, applying small-signal models to evaluate performance metrics such as gain and frequency response.

ECE 3709 Control Systems Engineering & Lab

- Modeled and simulated linear control systems in MATLAB/Simulink, including first- and second-order plant dynamics.
- Applied Laplace-transform methods to derive transfer functions and evaluate steady-state error for standard input signals

PERSONAL PROJECTS & EXTRACURRICULARS

Magic Mirror (Smart Mirror)

Dec' 21

- Engineered the mirror enclosure using custom cut wooden planks and two-way glass bought from Home Depot and Amazon
- Repurposed an LCD monitor by disassembling it to its core components, enabling seamless display output from the Raspberry Pi
- Deployed a Raspberry Pi as the core processor, configured the system with Raspbian OS, GitHub modules, Linux terminal commands and VNC Viewer, customizing modules to display real time news, weather and time

WDI Imagination Disney Imagineering Competition

Nov' 24

- Led a 3-person team as Project Manager and 3D Modeler for the WDI Disney Imagineering Competition, focused on reimagining public transportation in major cities.
- Coordinated weekly team meetings and enforced project milestone to ensure timely progress and deliverables
- Designed and rendered a detailed 3D train model using Blender to visually present our proposed transit solution and user experience

Café Sumire Ticketing System

Jun'25

- Developed a full-stack ticketing system using Node.js and Docker, enabling real-time order management between cashier and barista interfaces; configured local network communication via static IP addresses for multi-device synchronization
- Designed and implemented a responsive frontend in HTML, CSS, and JavaScript, creating an intuitive interface for placing, updating, and tracking orders in a café themed web application

ADDITIONAL EXPERIENCE

IT Intern

CHINT POWER SYSTEMS

Jun '25 – Aug '25

- Documented IT procedures and created internal guides to streamline onboarding and technical support
- Gained hands-on experience with cloud tools, device imaging, and Windows administration using VNC Viewer and Sysaid
- Supported IT operations including hardware deployment, software updates, user account management, and printer setup

Computer Systems Administrator

MARATHON PETROLEUM COMPANY

Oct '23 – May '25

- Collaborated with a 6-person team to roll out a new refinery-wide intranet that reduced page-load times by 40% for 150+ operators.
- Imported/exported SharePoint data into Excel to build Power BI dashboards-streamlined weekly safety-report generation
- Inspected and updated hundreds of operational forms, catching critical errors and ensuring compliance with safety rules

TECHNICAL SKILLS

- **Software:** C, C++, C# Raspbian, Python, Linux, MATLAB, Java, HTML/CSS, MPLAB, Blender, Fusion 360, Microsoft Tools, Unity, AutoCAD, Solidworks, Node.js, MongoDB
- **Hardware:** Electrical Circuit Design, Constructing Circuits, Raspberry Pi, FPGA Nexus A7 100T, Microcontroller PIC18F4620, Soldering