

ISHAN PANDHARE

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OBJECTIVE

Electrical Engineering student with hands-on experience in circuit design, programming, and hardware prototyping, seeking an internship to apply and expand technical expertise.

EDUCATION

California Polytechnic University - San Luis Obispo Class of 2027

2023-Present

Major: Electrical Engineering

Activities: IEEE, AWS Computing Club, Future Fuels

HIGHLIGHTED COURSEWORK & TECHNICAL SKILLS

Highlighted Coursework: PLTW Four-Year Engineering Pathway (high school);

1st Year: Calculus (I, II, III), Electronic Circuit and System Analysis (I, II, III) with Digital and Analog Systems, Circuit Prototyping and Design, Fundamentals of Computer Science, IoT Communications, I/O Logic, Physics (I, II, III)

2nd Year: Digital Design/Structural Modeling (level I & II), FPGA Logic Design, PLD Computer Design with Assembly Language, CAD, Energy Conservation Electromagnetics, Power Conservation Laboratory, Continuous Time Signals & Systems, Statistics, Quantum Physics

3rd Year: Semiconductor Device Electronics and Lab, Electromagnetic Fields and Transmission and Lab, Probability and Random Processes, Discrete Signals & Systems and Lab

Technical Skills:

Programming: Python, System Verilog, Assembly, Linux/UNIX

Tools & Platforms: Arduino, AutoCAD, CAD, Vivado, Fusion360/Eagle, LTSpice, RARS, Oscilloscope/Wave Function Generators, MATLAB, Microsoft 365, Altium;

Additional Skills: Communication Skills, Decision Making, Reporting, Critical Thinking, Presentation Skills, Collaboration, Consistency, Attention to Detail, Problem-Solving, Hardware Verification, Embedded Systems, SAS, PCB soldering/reworking, Microsoft 365, Quality Assurance, Test Development, Collaboration, Automation of Processes, Product Design

EXPERIENCE

Cal Poly Slo OWL Integrations - Researcher; In-Person/Remote

May 2024 - September 2024

- Optimized RF communication protocols, boosting system efficiency across multi-node deployments
- Developed Linux-based Wi-Fi alert system (C, Python), improving message delivery by 15%
- Integrated GNU hardware and ClusterDuck radios to achieve <5% packet loss during CDP transmissions

Comet College Application - Intern/Project Lead; Remote

March 2022 - August 2022

- Led 3-member team to design and deliver UI/UX prototypes ahead of schedule
- Conducted weekly SCRUMs to ensure progress tracking and on-time delivery
- Built intuitive interface prototypes contributing to product launch success

ACADEMIC PROJECTS

Boeing Algae to Biofuel Project - School Project

August 2025 - Present

- Designed a circuit board to lyse algae with 400 volts extract compounds to use for biofuel
- Implemented a parallel plate capacitor to closely arc and lyse successfully
- In the process of designing a simple chamber with specific material to moderate this separation process

Rube Goldberg Machine - Electronic Circuit Analysis III

November 2024 - January 2025

- Built 5+ breadboard subsystems integrating parallel circuits for sequential control
- Modeled and 3D-printed custom components using Fusion 360
- Integrated capacitive-touch piano, strobe light, light detection, and metal detector subsystems to complete all tasks in <30s
- Operated lab equipment (oscilloscope, multimeter, power supply) to validate circuit performance

Automated Faucet Attachment - Team Project

August 2022 - June 2023

- Designed servo-driven faucet attachment with timed automatic shutoff
- Programmed PCB timer (7-segment display) to monitor usage and trigger servo at 25s
- Integrated mechanical/electronic subsystems for reliable, repeatable performance
- Diagnosed signal noise and alignment issues, improving accuracy and activation consistency
- Presented prototype to engineering panel, earning commendation for innovation

ADDITIONAL INFORMATION

Languages: Fluent in English with Intermediate Knowledge in Spanish, Marathi, and Hindi

Interests: Artificial intelligence & Machine Learning, Portfolio Investment, Systems Development, Renewable Energy Technologies, IOT Applications, Hardware Prototyping, Car Advancement, Golf

Work Eligibility: Eligible to work in the U.S. with no restrictions (U.S. Citizen)