Justin Rosu

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Education

B.S. ELECTRICAL ENGINEERING **Expected 06/26**
California Polytechnic San Luis Obispo University San Luis Obispo, CA
GPA 3.7

- [Fall / Winter, 2023] - Dean's List
- Coursework: CPE 233 (Digital Design and Assembly Language Design), CPE 133 (Digital Design), CSC 101 (Intro To Comp Sci.), Circuits 1 -3

Experience

Publicity Coordinator **09/2022 - Current**
Cal Poly Power and Energy Society **San Luis Obispo, CA**

- Communicate via email with 130+ members of the club to relay meeting and event information
- Additionally, manage the social media platforms for the club to further establish good communication.

Activity Manager **10/2022-12/22**
PES Elementary School Outreach **San Luis Obispo, CA**

- A project as a part of the Cal Poly PES club which displays engineering to the younger generation and interests them into the STEM field and more specifically electrical engineering
- I was tasked with the project design to show how a wind turbine can power an electrical circuit
- The designing process included sketching, creative and critical thinking.

Projects

RISC-V CPU

- Design a 32 bit RISC-V CPU on a FPGA using SystemVerilog and Vivado which can run assembly
- Design assembly code to run on the CPU to execute simple tasks

Human Tracking Laser Pointer

- Used OPEN-CV AI python library to detect humans through a live video feed
- Funneled location data from python script to arduino serial monitor to make servos point the laser in the right direction
- Used solidworks skills to design a chassis for the laser pointer

4-Bit DAC

- Designed a DAC to play audio out of a speaker
- Designed a PCB using EAGLE autodesk and used LT Spice to run circuit tests
- Hands on soldering experience and DC circuit

Rube Goldberg Machine

- Handled AC and DC circuit design
- Designed a system of electronically isolated sensors and mechanisms that interact with one another
- Implemented light detector, capacitive touch sensors, metal detector, strobe light and stepper motors

Skills

- Python, C++, Javascript, Assembly/ Low Level Programming Language
- Open-CV, Node-JS, ReactJS, HTML, CS
- Eagle PCB Design, AC Circuit Analysis, DC Circuit Analysis, Circuit Design
- Solidworks
- HDL (System Verilog) and Vivado