Lily B. Goldman

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EDUCATION

California Polytechnic State University, San Luis Obispo, CA — June 2023
Bachelor of Science, **Electrical Engineering**

SKILLS OVERVIEW

Programing: Python, embedded C, Java, RISC-V and MIPS assembly language, Verilog
Applications: MATLAB, Simulink, AutoCAD, Pspice, LTSpice, Xilinx
Hardware: soldering, breadboarding, multimeters, wave generators, logic analyzers, oscilloscopes

EXPERIENCE

Kiler Ridge Farm (Paso Robles, CA) — June - Aug 2023
Farm Engineering Assistant
- Built a water flow rate monitor with WIFI communication to send email alerts for malfunctioning sprinklers
- Preformed PCB root cause analysis on malfunctioning EEPROM with a logic analyzer

Umbra (Remote) — Jan - May 2023
Digital Design Intern
- Developed a reliable CRC method for boot images on the Zybo Z7 FPGA for in flight hardware

Epirus (Los Angeles, CA) — June - Aug 2022
Electrical Engineering Intern
- Implemented Ethernet interface for FPGA communications on Digilent Arty A7 boards
- Contributed to RTL architecture in Verilog for a high-power pulsed RF device prototype
- Instantiated a Xilinx memory interface generator (MIG) for 256MB of DDR3 SDRAM external memory
- Experienced Agile development through Jira, Confluence, and Scrum

Southern California Edison (Santa Monica, CA) — June - Aug 2021
Distributions Intern
- Connected 30 city distribution planners to 3 crews by developing a paperless process for work orders

CLUB

Cal Poly Wind Power Club

Electrical Lead — June 2021 - June 2023
- Facilitated in the design, construction, and testing of a small-scale wind turbine for the 2023 and 2022 Collegiate Wind Competition (CWC)
- Led a team of 6 undergrads in the design of a high-power AC to DC circuit
  - Tested possible loads, a motor controller for AC brushless motor for power rectification and current sensing capabilities, and a buck boost converter to power the system's microcontroller
- Designed a digital control system to pitch turbine blades for maximum power production

Business Lead — June 2020 - June 2021
- Competed in the 2021 CWC to design an 100MW wind farm in South Dakota
  - Placed 3rd overall as a rookie team

PROJECTS

Microgrid Design for Local Farm (senior project) — June 2022 - June 2023

Function Generator — May 2022
- Designed a project with an STM32 microcontroller, external DAC, and keypad to allow users to select from 4 different waveforms and their respective frequency or duty cycle

Honda Civic Engine Swap (personal project) — Aug 2020 - Nov 2021
- Upgraded my 1996 Honda Civic hatch with a b18c Integra GSR engine