Diego E. Perez

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SUMMARY

I am a 3rd year electrical engineering major with a focus on power. I have completed all introductory circuit courses and am planning to take upper division courses in Power. Additionally, I have hands-on experience working with electrical substations.

EDUCATION

University of California- San Diego
B.S, Electrical Engineering **Expected June 2023**

- 3.41 GPA
- Power Engineering focus

EXPERIENCE

Base Electrica Dom SRL **July 2021- September 2021**
Intern

- Diagnosed and successfully troubleshooted an issue with the circuit breaker batteries of a major hospital in Santiago, preventing major damages to the substations in the event of a failure.
- Created company inventory which includes over 130 entries of substations components including transformers, relays, and circuit breakers.
- Presented my work to the company CEO
- Acquired knowledge on the infrastructure and operations of electrical substations by collaborating with other engineers.
- Conducted inspections of 10 electrical substations in the northern region of the Dominican Republic alongside other engineers gathering important information from the control panels of the equipment.
- Streamlined the company's data acquisition by creating online forms (google forms) which sped up the process of both inputting and organizing data.

Fleet Science Museum **June 2018 - August 2018**
Camp Counselor

- Taught science concepts in a fun and engaging way, adapting to the different sensibilities of the children
- Inspired curiosity in the children by orchestrating engaging activities in and around the museum.
- Ensured team productivity by volunteering myself for especially challenging assignments ranging from one-on-one support for particular children to taking on an extra group of children in the event of a counselor not showing up.

SERVICE, INVOLVEMENT, & ACTIVITIES

Institute of Electrical and Electronics Engineers (IEEE) **January 2021- Present**

- Assisted organize outreach events for middle school and high school aged students by collaborating with a team to put together Power Point presentations and attending regular meetings.
- Official membership to IEEE; I am an official member of the UCSD branch as well as the international organization.

RELEVANT COURSEWORK

- **Circuits and Systems**: Phasors and Sinusoidal Steady-State, Frequency Response of LTI Systems, Fourier Series and LTI System Response to Periodic Signals, Fourier Transform and LTI System Response to Energy Signals, Convolution, Impulse, Sampling, and Reconstruction, Modulation and AM Radio
- **Components and Circuits:** Transfer function of diode circuits, waveform shaping circuits using diodes, BJT circuits, MOSFET circuits, PSpice simulation
- **Introduction to analog circuits:** Fundamental circuit theory concepts, Kirchhoff's voltage, and current laws, Thevenin's and Norton's theorems, loop and node analysis, time-varying signals, transient first order circuits, steady-state sinusoidal response
- **Introduction to Active Circuit Design:** Nonlinear active circuits design. Nonlinear device models for diodes, bipolar and field-effect transistors. Linearization of device models and small-signal equivalent circuits. Circuit designs will be simulated by computer and tested in the laboratory

SKILLS

- Proficient in Microsoft Office
- Experienced in MATLAB
- Proficient in PSpice/ LTSpice
- Experienced with Lab Equipment (Oscilloscope/ Function generator) to analyze analog circuits
- Soldering
- Spanish speaker (fluent)
- Problem solving
- Critical Thinking
- Leadership