Michaela Perez

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Education

Aug 2017-Dec 2023 **Computer Engineering** **The University of Texas at Dallas**
GPA: 3.571 Professional Societies: IEEE, SWE

Employment

May 2020-Aug 2020 **Engineering Intern**, Ameren
Worked in the Supervisory Control and Data Acquisition group, establishing links between RTU devices and our system to reflect changes being made in the power grid and verifying the electrical equivalency of the power grid represented across our software platforms.

May 2019-Aug 2019 **Undergraduate Research Fellow**, The Center for Power Optimization of Electro-Thermal Systems
Developed and tested three 3D-printed, metal heat exchangers for electric vehicle batteries using SolidWorks and LabVIEW. Results indicated that additive manufacturing creates rough and porous surfaces that increase the pressure differential across the heat exchanger.

Relevant Courses

Electrical Network Analysis
Mesh and nodal analysis. Analysis of two-port elements, first and second order circuits in time domain, and steady state sinusoidal analysis using phasor technique. Laboratory experience.

Digital Circuits
Design and analysis of combinational logic circuits, latches, flip-flops, and datapath components, including state machine minimization.

Signals and Systems
Fundamentals of continuous and discrete-time signal processing. Linear system analysis including convolution, impulse response, Fourier transform, sampling, and z-transform.

Embedded Systems
Introduction to micro-controllers, peripheral devices, serial synchronous (SPI, I2C) and asynchronous communication (UART) interfaces. Developed micro-controller programs using ANSI-C.

Analog Integrated Circuits
Analysis and design of on-chip linear amplifiers, including operational, high-frequency, broadband and feedback amplifiers.

Projects

NatalCheq 2020-2021
Designed a non-invasive and wireless veterinary birthing monitor to detect the onset of labor in horses and potentially other animals. Delivered a prototype PCB to our sponsor, PonyUp Technologies.

Ladies in Tech Mentoring Program Fall 2020
A joint program between SWE and Women Who Compute to connect women within STEM Majors at The University of Texas Dallas and help students feel connected to the university, their major, and other women engineers through professional workshops and networking events.

Skills

Engineering
PCB Layout, Schematic Capture, Altium Designer, Fusion 360, LATEX, PSpice, Verilog, Git, Unix Systems

Programming
C++, Python, MIPS Assembly, Verilog, MATLAB

Laboratory
Oscilloscope, VNA, DMM, Signal Generator, Soldering, Power Supply

Professional
Agile, Calendar Management, Microsoft Office, Outlook 365, MS Teams, MS Excel