

Gabriela Ivonne Lopez-Salgado

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EDUCATION

The University of Michigan

Ann Arbor, MI

Bachelor of Science in Engineering in Computer Science

Expected Graduation Date: Spring 2025

Academic Awards: Center for Education of Women+ (CEW+) Scholarship, Engineering Scholarship of Honor, Special Engineering Student Scholarship, LEAD Scholarship, Victors Scholarship, and Jack Kent Cooke Foundation Scholarship Semi-Finalist (top 8%)

TECHNICAL EXPERIENCE

Test Engineer Intern | Cummins, H2 Connected Power Systems Department

June 2023 – August 2023

- Supported software implementation of a new transfer switch mechanism to an existing control by developing flow diagrams to visually represent power transfer processes in the transfer switch.
- Tested system flow on existing transfer switch hardware while tracking input and output signals to the control to understand and validate operation of the mechanism.
- Led efforts to recreate a software change request issue and defined the problem statement while collaborating with SMEs.
- Tested on a Hardware-In-Loop (HIL) test fixture, recommended and implemented a solution based on testing results, using MATLAB Simulink to resolve the transfer switch control's load shed feature for a signal processing and timer issue.

Student iOS Developer | Apple Developer Academy

May 2023 – June 2023

- Led a team in researching 60 recipes, 100+ workouts, and 20 selections of general advice in 10 hours for storing in a database.
- Developed a mobile iOS app in, ~70 hours, with an assistive feature to achieve a user's personalized nutritional and workout goals.

Independent Researcher

December 2022 – April 2023

- Built and deployed an embedded system used to study vibrations and temperature in concrete, as well as the effects of collecting data with epoxy-coated electronic components which proved that epoxy-coating has a minimal effect on that data's accuracy.
- Analyzed and measured the compressive and flexural strength of concrete slabs with different reinforcement material, and discovered a material passing state specifications, being less laborious, and costing ~15% the cost of the material used in industry.

Research Assistant | Michigan Human-Artificial Intelligence Laboratory

May 2022 – September 2022

- Developed and tested the user interface (UI) of an iOS app for people with visual impairment to program their assistive technologies by leveraging various artificial intelligence (AI) functionalities and applying functions to off-the-shelf AI model out.
- Programmed voice-over accessibility and dark mode styles to improve the iOS app's UI.

Research Assistant | Michigan Robotics Department

December 2021 – April 2022

- Investigated and designed a digital LED matrix alarm clock with an implemented FM radio, by creating an embedded system with an Arduino, LM386 amplifier, speaker, and button UI to allow setting alarms and time, monitoring the volume and station played.
- Built a circuit where resistors in series provide buttons unique power levels to pass signals by analog input to a microcontroller.

LEADERSHIP EXPERIENCE

Vice President of External Affairs | Society of Hispanic Professional Engineers

May 2022 – Present

- Co-programmed recruitment events, like the first-ever event series of 3 SHPE Nights which increased involvement by 18 students.
- Co-devised the 2023 SHPE'd Abroad program, that focuses on outreach in under-served communities, to teach 2 groups of 50 K-12 grade students the aspects of engineering with 12 personally designed lesson plans for 35 hours of instruction.
- Managed and oversaw fundraising of \$16,000, to sponsor 16 members for attending SHPE'd Abroad in the Dominican Republic.
- Co-prepared SHPE Jr. sessions targeting 24 hours of professional, academic, and technical skills development for 15 students.
- Founded and produced, with a committee, 6 Spotify podcast sessions and YouTube videos interviewing SHPE-UM alumni to strengthen our alumni network and speak about topics involving graduate school, life as an engineer, and imposters syndrome.

Chief of Human Resources and Office Assistant | Lopez Concrete Construction, LLC

February 2018 – June 2023

- Coordinated the company's schedule, materials for job sites, project invoices, created legal binding contracts, and implemented trust among both parties to ensure release of liabilities and the smooth execution of construction projects.
- Managed communications with other contractors by informing what the crew's responsibilities were at preconstruction meetings and meeting the project inspector on-site to ensure projects were completed in accordance with the specifications.

Peer Mentor | Women In Science and Engineering – Residence Program

August 2022 – April 2023

SKILLS

Technical Skills: C++, C, R, Swift, Mobile App Development, Data Structures, Assembly, Embedded Systems, Electronic Circuit Design, MATLAB (beginner), and Simulink (beginner), Soldering, Surface Mount Soldering, Concrete Paving, Concrete Testing.

Languages: Fluent in Spanish and English.