JESUS HERNANDEZ

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EDUCATION

The University of Texas at Austin Bachelor of Science, Electrical and Computer Engineering Honors — Dec 2024

GPA 3.48

WORK EXPERIENCE

ExxonMobil– *Electrical Instrumentation Engineering Co-op;* Beaumont, TX — May 2023 – Aug.2023

- Conducted an in-depth analysis of safety protocols, pinpointed safety system functions and alarms requiring migration from DCS Systems to PLC Systems. Formulated a comprehensive plan for the migration of multiple functions.
- Revamped a dormant Training PLC (Programmable Logic Controller) training system that had been inactive since 2019. This involved troubleshooting and repairing the system, devising a practical problem scenario for prospective trainees to tackle, and producing a comprehensive machine manual with instructions for its operation and restoration to functionality.

ExxonMobil– *Electrical Engineering Co-op;* Beaumont, TX — May 2022 – Dec. 2022

- Analyzed electrical faults on a synchronous motor to determine what faults are safe to ignore, saving the company upward of $200,000 per hour that the motor is down.
- Spearheaded a project to plan the maintenance/replacement of a switchgear by isolating some of its loads that have been cross fed across units and hasn't been maintained in over 30 years, saving upwards of $2M/day should the switchgear Fail.
- Backfilled as Electrical Engineering contact while mentor was on vacation for 2 weeks. Had to deal with daily tasks and trouble shoot electrical issues that occurred in his absence.

ACADEMIC PROJECTS

ebay recreation (EHills) , The University of Texas at Austin — Spring 2023

- Designed, tested, and debugged a fully operational ebay server in Java that had all core functionality.
- Created a server that utilized mongoDB for the housing product and customer data. The server also created sockets allowing multiple customers to use the site at once without having to use the same computer.

Toy Programming Language, The University of Texas at Austin — Spring 2022

- Designed, tested, and debugged a toy programming language using C++ to interpret and implement the code.
- Language had to have its own functions, syntax, math system (Polish notation), Data structures, and comment system.

Embedded Systems Video Game Design, The University of Texas at Austin — Fall 2021

- Created a fully operational video game using C and assembly to be displayed on an LCD screen with interactive buttons, soundtrack, and multiple custom sprites.
- Created a main menu with player options, display options, and language options (English and Spanish).

YASH (Shell creation) , The University of Texas at Austin — Fall 2023

- Created my own version of a command shell such as Bash in C that runs on a Linux server.

LEADERSHIP EXPERIENCE AND ACTIVITIES

Society of Hispanic professional Engineers (SHPE)-*Freshman Roundtable Chair* — Aug 2021 – May 2022

- Met weekly with Leadership Development team to discuss future leadership growth opportunities for the organization.
- Organized and facilitated events to support first- and second-year members, and lead recruitment initiatives.
- Mentored high school robotics teams using prior technical experience and knowledge with the FIRST Robotics competition.

Gains in The Education of Mathematics and Science(GEMS) – *Mentor(July 2020)* — July 2019,2020

- Formulated connections with Professional Engineers working at White Sands Missile Range.
- Oversaw groups of 40+ people partaking in the summer camp as a mentor while they completed assigned tasks
- Gained hands-on experience while working with professional engineers.

HONORS AND ACHIEVMENTS

Engineering Honors	October 2021-Present	Dell Scholar	Aug 2020- Present
Impact Scholar	Aug 2020- Present	Friends of ALEC Scholarship Recipient	Aug 2020- Present
Ramshorn Scholar	Aug 2020- Present		

ADDITIONAL INFORMATION

Technical Skills: Assembly, C, C++, Java, Python, Excel, Word, PowerPoint**,** Tri-Station

Languages: Fluent in English and Spanish