Hortencia Alejandra Ramírez Vázquez

B.S. in ***Robotics and Digital Systems Engineering*** with an *Associate Degree in Computer Technology*, known for strong leadership, always motivated to learn and face new challenges. Exceptional in teamwork and communication skills, dedicated to achieving goals through innovative and impactful solutions. A seventh-generation member of "Líderes del mañana" program at Tec de Monterrey, awarded a 100% scholarship. Additionally, I possess a deep-seated passion for entering the realm of research and development.

Contact

+52 55 48078019
ha.ramirezv@outlook.com
LinkedIn
GitHub
Personal website:
https://soyhorteconh.github.io/

Programming languages

c++	6 years
Python	3 years
HTML/CSS	2 years
Matlab	2 years
SQL	1 year
Rstudio	6 months
VHDL	4 months

Certifications

Humanist Leadership and Social Transformation by ITESM	2021
Positive Leadership and Personal Transformation by ITESM	2020
CCNA Routing and Switching by Cisco	2018
Office Excel by Microsoft	2018
Office Power Point by Microsoft	2018
Office Word by Microsoft	2017

Technologies

Linux, Visual Studio Code, Python, phpMyAdmin, Quartus prime, Simulink, Microsoft Office Tools, Robot Operating System (ROS), RVIZ, Gazebo, Open CV, Arduino.

Languages

Spanish- Native
English-
Toefl IBT (B2)

Hobbies

Reading, working out, swimming, listening to music, watching, and creating YouTube videos.

Education

Instituto Tecnológico y de Estudios Supeiores de Monterrey (ITESM) — Graduating in June 2024
B.S. in Robotics and Digital Systems Engineering — Current GPA 98.81/100 (US GPA – 4.0)

Bachillerato Tecnológico de Plantel Azteca — August 2016 – July 2019
Associate Degree in Computer Technology — GPA 9.9/10 (US GPA – 4.0)

Experience

Research and Developer Intern at INRIA – Nancy, France — September 2023 – December 2023

RoboHand Navigator: Enhancing robot hand pose using Azure Kinect SDK sensor and visual markers tracking for object manipulation with Tiago for the EUROBIN project at Larsen team.

- Supervised by Serena Ivaldi, Jean-Baptiste Mouret, and Quentin Rouxel

Designed of a mini Autonomous Vehicle at Manchester Robotics – Nuevo León, México — March 2023 – June 2023

Developed software using ROS, OpenCV libraries in python, and Yolov5 to create an autonomous vehicle implementing PID controllers, and computer vision for traffic lights and signals detection.

Robotics Developer at VantTec – Nuevo León, México — August 2022 – August 2023

- Conducted research within the college program to develop a software prototype for object detection in an Unmanned Underwater Vehicle using Roboflow, the YoloV5 library, and ROS. (Awarded in software prototype category at Expo Ingenierías 2022)
- Performed PCB assembly.

Social Responsibility Director, College Robotics Association (SAIRS) – Nuevo León, México — July 2022 – June 2023

- Lead and organized the **"Sin Miedo a la Corriente"** program, enrolling children in science and technology fields, with a total of 75 volunteers and participants for a robotics camp.
- Spearheaded the "**Women2Connect"** program, which is an event from women to women, facilitating monthly meetings to create support networks and share experiences among women in engineering, with 30 women participants in the robotics filed.

Aztech Robotics Coach Program at First Robotics Competition (FIRST) – Mexico City, México — Aug 2019 – Aug 2020

Software developer of a FIRST robotics team – Aztech Robotics — August 2017 – July 2019

- Coach and leader of 32 High School students in the design, construction, and programming of a robot using advanced robotics for the FIRST Tech Challenge competition.
- Software developer for a First Robotics Competition team, using C++ and LabVIEW programming languages to design autonomous and teleoperated moods for a robot.

Projects

Designed the hardware architecture for an arcade videogame (Intel) – Nuevo León, México — March 2022

Developed the architecture for an arcade videogame that interfaces with a VGA monitor using FPGA, VHDL programming language, and Quartus software.

Research Project: Bioinformatic analysis of differentially expressed genes in colon cancer using Rstudio. — September 2021

Published in the National Congress of Biotechnology Journal in 2021, Volume 25, Number 4. ISSN: 0188-4786. *(SMBB 2021, p.403)*

Achievements

Second-place winner at HackMTY 2022 — September 2022

System to optimize the irrigation process of a crop, minimizing water loss, and maximizing production in reduced spaced. Using technologies such as Internet of Things, web development, mobile prototyping, and vertical farming's.

"Líderes del Mañana" Scholarship to study Robotics and Digital Systems Engineering at Tecnológico de Monterrey. — August 2020

Given to high academic performance students, and outstanding social commitment with strong leadership abilities. Grating a 100% scholarship for college education.

Qualification to participate in FIRST Robotics Championship Houston. — April 2018 and April 2019

Participating in an international robotics competition, through receiving the Engineering and Winner awards at the 2018 and 2019 regional competitions in Mexico, underscored our team's exceptional performance and innovative problem-solving at engineering.