Jorge Askur Vazquez Fernandez

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⦿ Monterrey, Nuevo Leon, Mexico

Education

Bachelor of Science in Robotics and Digital Systems Engineering,   08.2020 – 06.2024
Tecnologico de Monterrey
GPA: 96/100
Academic Merit Scholarship & Academic Merit Award

Design of Advanced Embedded Systems project: Self-Regulating Air Pressure System for John Deere ⧉
Design of on-Chip Systems project: Infotainment System with Raspberry Pi and STM32F103C8T6 for Intel ⧉
Design with Programmable Logic project: Tic-Tac-Toe-FPGA for Intel ⧉

Relevant Coursework: Data Structures and Algorithms, Computational Architectures, Internet of Things, Object-Oriented Programming, Secure Networks.

Projects

VantTec Student Group, *Working as a Software Engineer for the*   08.2022 – present
Unmanned Underwater Vehicle Team ⧉
- Coordinated a team of 7 people to design, document, and implement a state machine for a simulated Unmanned Underwater Vehicle (UUV) for the RoboSub competition, using Python, Docker, and Robot Operating System (ROS).
- Developed a 3D pose estimation system using OpenCV, Linear Algebra, Python & ROS to identify the location of different targets.

SOMCIS Research Project, *Working as a Project Leader and Software*   06.2022 – present
Engineer for the Computer Vision Team
- Reorganized the project by focusing on Social Robotics therapy and coordinated 3 teams toward the development of a prototype app.
- Led a team of 5 people to the development of an emotion recognition system using Python, OpenCV, Flask, and the Deepface library.

VEX U Robotics Team,   08.2020 – 06.2021
Worked as a Software Engineer for the ITESM2 Team ⧉
- Developed the remote control of the robot and the autonomous routine using PID control in C++, resulting in movements with a precision of 95%.
- Instructed 10 new team members on Python & C++ programming in a month for Vex U.
- Competed in a competitive programming tournament in the Mexican Pre-national Robotics Championship 2021, achieving 1st place in the Programming Championship and the Award of Excellence.
- Reached 23rd place in the 1st Division on the Vex U In-Person Championship 2021, in Greenville, Texas.

Skills

Technical Skills
HTML, CSS, Express, Docker, ROS, OpenCV, Pandas, Flask, Linux, OOP, Rviz, Gazebo, SQL, Firebase, Bootstrap, Git, Embedded Systems, RTOS, Jira, NumPy, Parallel Programming, OpenMP, Communication Protocols (SPI, Serial, CAN, I2C).

Soft Skills
Leadership, Teamwork, Communication, Problem-Solving, Patience, Adaptability

C/C++   ● ● ● ● ●

MATLAB   ● ● ● ● ○

Python   ● ● ● ● ●

JavaScript   ● ● ● ○ ○

Courses

CS50x Introduction to Computer Science, *Harvard*

Languages

English
TOEFL IBT 109
Reading 29 Listening 30 Speaking 25 Writing 25