

Leonel Alejandro Montoya

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EDUCATION

Instituto Tecnológico de Monterrey

High School Graduate with Honors. GPA 4.0 out of 4.0

Guadalajara, Mexico

Aug. 2019 – May 2022

University of California San Diego

Aerospace Engineering and Computer Science. GPA 3.6 out of 4.0

San Diego, CA

Sep. 2022 – present

EXPERIENCE

Hack at UCI Best Beginner Hack Winner

2024

University of California Irvine

Irvine, CA

- Developed a website, hosted using Google Cloud, that simplifies the process of splitting bills with multiple people.
- Learned and proficiently utilized the Django framework for building the back-end of the server in under 48 hours.
- Led a team of two for the back-end development of the website.

HackDavis

2023

University of California Davis

Davis, CA

- Developed a website that gives you a cooking recipe along with instructions on how to cook it depending on the ingredients available.
- Implemented OpenAI API into React framework.
- Led a team of three for the back-end development of the website.

FIRST Robotics Competition

2020 and 2022

Instituto Tecnológico de Monterrey

Monterrey, Mexico

- Developed the mechanical aspects of a robot capable of multi-directional movement, picking up and throwing 15cm-diameter balls, and climbing parallel bars up to 2.5m.
- Guided new team members to enhance their understanding of robotics.
- Contributed to team organization and management to have the robot ready for competition before the deadline.

Coding, Chemistry, Math, and Physics Tutor

2019 – 2022

Instituto Tecnológico de Monterrey

Guadalajara, Mexico

- Taught school material to both individual students and small groups.
- Prepared students for school exams and college admission tests.
- Organized study sessions for up to 15 students.
- Greatly increased the students' proficiency at school.

Application Start-Up Experience

2023

University of California San Diego

San Diego, CA

- Led a team of three in the software development of an application designed to enhance student's efficiency.
- Coordinated with the application designer to optimize the visual appearance of the project.

PROJECTS

Radio Communication Protocol | *Micropython*

- Developed a 433mhz radio receiver protocol to handle data reception through digital signals, based on the Manchester code.

Radio Receiver Micropython Library |

- Developed a Micropython library that handles 433mhz digital signals, intended for use on a Raspberry Pi Pico with a receiver module.

RaspberryPi Robot | *Python*

- Developed a two-wheeled remote-controlled robot with infrared camera using a RaspberryPi 4 microprocessor

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript, MATLAB, Arm Assembly, HTML/CSS

Microcontrollers: Raspberry Pi Pico, Arduino

Microprocessors: Raspberry Pi

Frameworks: Django, React, Node.js

Developer Tools: Linux, Git, Github, Google Cloud Platform, Visual Studio Code