

César Guillermo Vázquez Alvarez

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Education

ITESM (Instituto Tecnológico y de Estudios Superiores de Monterrey)

Fall 2020 - Spring 2024

Speciality: Bachelor of Engineering in Data Science and Math

Freshman

EIAO High School (Escuela Industrial y preparatoria técnica Álvaro Obregón of UANL)

Fall 2017 - Spring 2020

Speciality: Technician at Mechatronics

GPA:3.5/4.0

Skills

Abilities

- Team work
- Coding skills
- Artistic sensitive
- Visioner

LANGUAGES

Spanish: Native
English: B2
German: A2

EXPERIENCES

Firestore
OpenCV
TensorFlow
Flutter
Ros Kinetic Kame
PLC Micrologix
CNC lathe
LabView
Eagle
Microcontrollers

Major Projects

Rutix (Jan 2017-July 2018)

In Mexico the location of buses does not exist, this project was a technology startup which sought to locate public buses in real time where passengers knew when their truck was going to arrive at their stop through Rutix.

- We use microcontroller technology to predict the location of the buses and then send it to our firebase database.
- Developing of native iOS app on swift, the technologies that use firebase database to receive and plotting the location with google maps api.

Se Road (2019 - present)

Technology startup that seeks to eradicate accidents generated by human factors through computer vision such as drowsiness, analyzing different biometric parameters of the driver.

- Through TensorFlow and opencv face classification we developed the algorithms based on deep learning to detect different face parameters such as blinking and pitching and then send sound alerts so that the driver does not fall asleep.
- Finalist in university's internal "Shark Tank" (Tiger Tank)
- Project select for TecLean and received a scholarship at Tecnológico de Monterrey

Arquify (Jan-Jul 2019)

Platform for developing architectural plans autonomously, which were made depending on customer needs.

- Using tensorflow we developed the plans and then with different javascript frameworks such as: angular and node.js we were developing the backend of the web platform so that it could show the architectural plans.

Awards:

15th place in World Robotics Olympiad in New Delhi, India, Soccer Category 2016.

8th place on World Robotics Olympiad in Costa Rica , Soccer Category 2017.

Regional Engineering Inspiration Award FIRST Laguna Regional, 2017

Participation on FIRST Global in Houston 2017.

Participation on Global Student Entrepreneur Award in IOS Offices 2017

1st place on Global Challenge ITESM 2017

1st place in the Rotaract District Fair of projects 2017 presented the project "Brazos que cambian vidas"

Participation in the 1st edition of "Programa de tecnologías exponenciales, emprendimiento e innovación social para jóvenes de altas capacidades" 2017.

Participation on XXII Olimpiada de Mayo de Matemáticas de México, in Mexico City,

1st place on Social Impact, in Rally Latinoamericano de Innovación

2th place on Talent Land's Hackaton 2019, Bosch track

11th place on International Robotics Contest Robocup Sydney, Australia, Soccer Open Category 2019

1st place on Hackathon4Justice 2019 organized by United Nations.

Brazos que cambian vidas (Aug-Oct 2017)

Development of myoelectric prosthesis at affordable costs for children, this project was carried out in conjunction with the Universidad Autonoma de Nuevo Leon.

- We designed the model of the prosthesis in fusion 360 and after having the design we printed this one with 3d printing.
- With different circuits and a myoelectric bracelet, we analyzed all the signals with the raspberry in which I develop with cases and range detection to define the movements of the fingers and hand of the prosthesis all the code was programmed in python.

Industrial-Nanny (April 2019)

Hackathon's project in which we looked for the detection of possible situations of accidents in factories by means of computer vision in which we detected if the worker had all the safety measures like: safety glasses, helmet and ear plugs.

- Through opencv and TensorFlow we developed the face detection algorithm with a accuracy of 0.91 to detect if the worker had all the security measures and if he did not comply with them the bosh xdk turned off the machinery where the worker is working

Pasfy (2019 - present)

Winning project of Hackathon of the UN in which we sought the early detection of possible cases of family violence through a web game in which depending on the response of the child we are measuring and predicting if this is suffering violence in their homes.

- In this project using javascript we analyzed the different game cases in the video game to determine if the child lives violence at home, the frontend was made with css3 and html5.