

Edgar Rodolfo Chavez

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https://edchav.github.io/

Profiles

Edgar (Eddie) Chavez

edchav

Skills

Languages

Javascript, HTML5, CSS3, Python, SQL

Technologies

React.js, Node.js, Express.js, Tailwind, PyTorch, Tensorflow, Flask

Tools

Git, Linux, Microsoft SQL Server, ArcGIS Pro

Software Developer & Machine Learning Engineer with research and industry experience in deep learning, geospatial analysis, and database development.

Experience

ServiceLink

April 2024 – Present

Quality Control Researcher

Arlington, TX

- Redesigned relational database using the Entity-Relationship modeling and implemented Microsoft SQL Server procedures.
- Developed and maintained SQL queries for ad-hoc reporting and data validation.
- Built a multiclass neural network using PyTorch Lightning to predict flood risk for properties, achieving **99.1%** accuracy.

University of Texas at Arlington

August 2022 – May 2024

Graduate Teaching Assistant

Arlington, TX

- Graded assignments, exams, and projects for undergraduate/graduate computer science courses.

National Institute for Aviation Research

February 2020 – April 2021

Student Lab Technician

Wichita, KS

- Developed PLC programs and optimized Visual Basic macros for lab automation.
- Operated and programmed collaborative and industrial mobile robots.

Ennovar

July 2019 – January 2020

Student Contractor

Wichita, KS

- Provided Tier 1/2 support for SAP, Exchange, and Microsoft Office products across desktop and mobile devices.
- Resolved hardware/software issues for Window devices and supported user onboarding.

Education

University of Texas at Arlington

August 2022 to May 2025

Computer Science

Master of Science

3.667 GPA

Wichita State University

August 2018 to May 2022

Computer Science

Bachelor of Science

Publications

Touch Detection in Augmented Omni-Surface for Human-Robot Teaming

December 2022

The Journal of Management and Engineering Integration, Vol. 15, No. 2
Winter 2022

https://soar.wichita.edu/items/b8b45df4-455e-4690-a872-3224a42821a7

- Built a fingertip detection system using RGB-D sensors and VGG-16 CNNs for robotic interaction on arbitrary surfaces.
- Achieved **82.87% F1-score** in simulations across different surfaces.

Quantum Convolutional Neural Network Image Classifier

August 2021 – December 2021

- Compared Q-CNN and traditional CNNs on MNIST dataset using IBM Q and Qiskit.
- Evaluated quantum performance on 60,000 training and 10,000 test images.