Fernando Muñoz

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github.com/fermunoz17

Education

The University of Texas at El Paso *May 2025*
B.S in **Computer Science**, Concentration in **Software Engineering** | **GPA: 3.65**
Fast Track Undergraduate Program, Master of Science in **Artificial Intelligence**
Honors and Awards: Class of 2023 GMiS STEM Scholar, NSF S-STEM Scholar, 1st Place Smart Cities AI Hackathon.
Relevant Coursework: Advanced Object-Oriented Programming (Java), Database Management (PHP & SQL), Software Requirements (Python), Software Construction (Java), Machine Learning **Fast Track** (Python).

El Paso Community College *August 2023*
A.A in **Computer Science** | **GPA: 3.88**
Honors and Awards: 2023 IEEE Region V Third Place Student Poster Competition, 2022 GMiS Conference Second Place Undergraduate Poster Competition, 2022 Enhanced Honors for Elem. Data Structures & Algorithms.

Experience

Software Engineer Intern, American Express – Phoenix, AZ June 2024 - Aug 2024

- Developed the UI for an internal testing tool used within the AMEX network using **ReactJS**, improving usability.
- Added endpoints to the tool using **Spring Boot** and **Maven**, enhancing backend functionality and integration with multiple **REST APIs**.
- Worked within a fast-paced **Agile** environment, contributing to a project with **continuous integration** and **continuous delivery**. Adapted quickly to changes and collaborated effectively with **cross-functional** teams.
- Increased team productivity by **10%** by deploying the UI as a **Docker** component, streamlining the testing process and making the tool more accessible to other engineers.

Undergraduate Researcher, CAHSI – El Paso, TX Feb 2022 – Feb 2023

- Conducted the research project *How to Program Fairness in Intelligent Systems: Breaking Status Quo Solutions by Using Explainable AI*.
- Conducted an in-depth analysis of prevailing learning models employed in the field of **Autonomous Vehicles**, contributing to a comprehensive understanding of their methodologies and limitations.
- Executed controlled experiments to investigate and evaluate the decision-making processes of test subjects, a pivotal contribution to refining our understanding of **human-AI** interactions in critical decision-making scenarios.

Software Engineering Intern, Steele Consulting Inc. – El Paso, TX June 2021 – Aug 2022

- Served as a dynamic **full-stack** intern in a highly collaborative **Agile** project management environment.
- Actively contributing to front-end development for a cutting-edge shipping container tracking website, gaining hands-on experience using **AngularJs** and **NodeJs**.
- Assisted in the deployment of web applications utilizing **Docker** and **Heroku**, acquiring valuable insights into the intricacies of application deployment and cloud technologies.

Publications

F. Muñoz, C. Servin, V. Kreinovich. *How to Fairly Allocate Safety Benefits of Self-Driving Cars*. UTEP-CS-24-19, 2024.
Summary: Designed a model to minimize harm in unavoidable pedestrian/self-driving car accidents.
scholarworks.utep.edu/cs_techrep/1875

Technologies

Languages: Java, HTML/CSS, TypeScript, C, Dart, Python, PHP, SQL, RISC-V.

Technologies: NodeJs, AngularJs, ReactJs, Version Control, Docker.