ALVARO ESPINOZA

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SKILLS

- Languages - Python, SQL, HTML, CSS, JavaScript, TypeScript, C++, C#, Java, Kotlin, MATLAB, LaTeX, PowerFX
- Libraries - React, Pandas, TensorFlow, matplotlib, numpy, three.js, Streamlit
- Other - Git, AWS, Bash, Azure, Google Cloud, Power Automate, MongoDB, Docker, Express, Linux, LabVIEW, Unity

EXPERIENCE

May 2023 – Present

Software Engineer, *PMG Project Management Group*

- Developed and deployed a construction cost analysis application utilizing **Python** and the **Streamlit** framework.
- Utilized **AWS S3** Database for secure storage and retrieval of construction price data.
- Created a daily report mobile app leveraging **TypeScript** and **PowerFX** which reduced turnover time by more than a month.
- Led planning and update meetings regarding applications to team members and upper management.

Feb 2020 – Dec 2020

IT Technician, *Texas A&M*

- Provided faculty and staff with technical support including computer and network management.
- Utilized **ticketing system** to resolve incoming requests through in person and remote assistance.
- Worked collectively as part of a **5 member team** which included IT Professionals and Technicians to complete over 100 tickets.

Aug 2019 – Dec 2019

Python Teaching Assistant, *Texas A&M*

- Assisted in teaching **Python** to a classroom of 60 engineering students.
- Taught the foundations of software design by guiding students to implement and debug programs.
- Hosted weekly office hours to provide guidance in developing code and problem solving.
- Graded over 700 assignment submissions and provided constructive feedback on the students' code.

EDUCATION

Aug 2018 – Dec 2022

B.S.,Electrical Engineering, *Texas A&M University*

- Minor: Mathematics
- GPA: 3.5
- Relevant Coursework: Program Design, Computer Architecture, Probability, Linear Algebra, Differential Equations, Calculus, Data Structures, Algorithms, Cryptography, Data Security, Electronics, Security of Embedded Systems, Linear Control Systems, Digital Systems Design

PROJECTS

Aug 2022 - Dec 2022

Senior Design Capstone - Shoe AR Android App

- Collaborated with 3 other students to create an augmented reality storefront app for trying on shoes and measuring shoe size using **Kotlin**.
- Created and integrated a foot detection model using **TensorFlow** to superimpose 3D shoe models onto users' feet within the AR camera.
- Implemented a size measuring algorithm to provide a recommended shoe size in **Kotlin**.
- Evaluated the model to be **93% precise** and the algorithm to have a **5% size measuring error**.

Jan 2022 - May 2022

Unity Image Dataset Generator

- Researched how to create large datasets for object detection training using virtual environments in **Unity**.
- Developed **C#** scripts to control the virtual environments and generate datasets for detecting feet.
- Generated an augmented dataset with over **50,000 images**.