

# Jacob Montenegro

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## Experience

Bay Bridge Administrators, Austin, Texas

August 2024 – Current

### EDI Programmer/Analyst

- Developed a **toolset** for **decrypting**, **reading**, and **converting** from **CSV/XML/834 file types** into a **proprietary file format**.
- Created a **process** for **one-time enrollment** of **insurance subscriber data**, using **statistical methods** to **map subscriber data** to the **database**.
- Developed a **backend** in **Go** using **Fiber**, to **access data** and **utilize the tools** within the **frontend**.
- Created a **Proof of Concept** for the **frontend** in **Python** using **Tkinter**; currently **evaluating migration** to **Angular**, **TypeScript**, or **Windows Presentation Foundation**.

General Motors, Austin, Texas

July 2021 – February 2024

### Full-Stack Software Developer

- **Led the design and implementation** of a vehicle diagnostic web application that would feed data into the main eDiagnostics web application, which serves as a **dynamic tool** for technicians to manage diagnostic and repair steps, enhancing **workflow efficiency**.
- **Engineered a robust backend** with **Java Spring Boot** and designed a **user-friendly UI** with **Angular**, informed by insights from collaborating with **production-line engineers and technicians**.
- The **successful launch** of this application **improved production performance**, **reduced faulty vehicles**, and provided a **platform for continuous training**.
- The application also features a **unique capability to resolve defects**. Initially, it resolved around **2,000 unique defects** from a growing list, in collaboration with a **team of experts**. Designed for use by other **qualified individuals**, it continues to **improve the efficiency** of the defect management process.
- **Collaborated** with engineers, diagnosticians, and business leaders daily to develop a **web application** that trains technicians to resolve **error codes** during vehicle assembly.
- **Designed frontend solutions** to work across **desktop and mobile devices** that displayed **vehicle diagnostic information** in a cohesive manner.
- **Designed and developed Restful API endpoints** for collecting **vehicle defect data**.
- **Collaborated** with a cross-functional team to develop a **streamlined process** for the creation and collection of thousands of synthetic data images, enhancing the efficiency of data gathering.
- Utilized the collected synthetic data to **improve** the performance of computer vision systems, leading to more accurate and reliable results in real-world applications.
- Contributed to the **rigorous training and testing** of the computer vision systems using the synthetic image data, ensuring the systems' robustness and adaptability to various vehicle defects.

## Technical Skills

- **Programming Languages:** Java, Python, TypeScript, JavaScript, C/C++
- **Web Development:** React, Angular (13-16), Next.js, Node.js, HTML5, CSS, XML
- **Backend Development:** Spring Boot, RESTful APIs, Web Services, SQL, PostgreSQL, Microsoft SQL Server
- **DevOps and Version Control:** Git, GitHub, CI/CD
- **Operating Systems:** Windows, Linux
- **Methodologies:** Agile, Scrum
- **Other Skills:** Full-stack development, User Interface (UI) design, Web accessibility, Debugging, IntelliJ, VSCode

## Education

The University of Texas at El Paso

August 2017 – May 2021

Bachelor of Science in Computer Science with a Minor in Mathematics