

Juan Carlos Dominguez

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Technical Skills

Programming Languages: HTML, CSS, JavaScript, Python, SQL

Technologies/Frameworks: React, Node.js, Git, REST APIs, Pandas, NumPy, Matplotlib, SpiceyPy

Developer Tools: Visual Studio Code, IntelliJ, GitHub, MySQL

Personal Projects

Space Science Project | *Python, Pandas, Matplotlib, NumPy, SpiceyPy* **Winter 2023**

- Collaborated with developers to enhance data acquisition and analysis efficiency by 50% utilizing Pandas, NumPy, and SpiceyPy to implement advanced algorithms for data processing.
- Employed Matplotlib to craft impactful visualizations in order to streamline data analysis, reducing interpretation time by 30%.

International Space Station Tracker | *HTML, CSS, JavaScript, Open Notify API* **Winter 2023**

- Integrated and engineered Open Notify API, utilizing HTML, CSS, and JavaScript, resulting in a 25% increase in real-time accuracy of ISS positional data retrieval.
- Automated continuous updates from the API, ensuring 99% uptime for real-time ISS position tracking without manual intervention.

Fitness Tracker Machine Learning | *Python, IntelliJ, Pandas, NumPy, Matplotlib* **Fall 2023**

- Engineered a machine learning algorithm that attained a notable accuracy rate of 96% in recognizing and tallying exercise repetitions, mitigating the need for manual input.
- Orchestrated the research, processing, and analysis of a comprehensive dataset, encompassing 1000+ workouts and 200,000+ repetitions, in order to meticulously train the algorithm.

Self-Driving Car Machine Learning | *HTML, CSS, JavaScript, Node.js* **Summer 2023**

- Optimized the implementation of a neural network-based control model to enable a car to autonomously navigate intricate scenarios, resulting in a 30% reduction in navigation errors.
- Quantified and interpreted physics-based models into a self-driving system to enhance its understanding of the environment and improve the data processing time by 15%.

Unsplash Image Search API | *HTML, CSS, JavaScript, REST API* **Spring 2023**

- Developed a robust image search REST API using JavaScript, resulting in a 30% reduction in image search time for users among Unsplash's Cloud.
- Optimized user experience and web accessibility through the implementation of advanced search filters, that lead to a 20% increase in user engagement and positive relationships.

Non-Technical Experience

Physical Therapist Aide Manager | *Vargo Physical Therapy* **April 2020 - August 2023**

- Directed and led clinical operations across 2 outpatient facilities, overseeing diverse responsibilities and fostering a collaborative environment among a team of 10+ staff members.
- Employed technological solutions to assist patients in troubleshooting and understanding complex treatment plans, leveraging digital tools to clarify and streamline information, resulting in a 25% increase in patients' ability to self-manage their treatment regimens.
- Implemented strategic solutions that improved patient turnover by 10% during peak occupancy, demonstrating adept problem-solving skills in managing high-demand scenarios.

Education

- M.S. Computer Science, *Southern Methodist University* **Expected Graduation: May 2025**
- B.S. Public Health, *University of California San Diego* **Graduated**