

# Juan Carlos Dominguez

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## Technical Skills

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

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

**Developer Tools:** Visual Studio Code, IntelliJ, GitHub, MySQL, Jupyter Notebook

## Personal Projects

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**Connect 4 AI** | *Python, Jupyter Notebook, Minimax Algorithm, Alpha-Beta Pruning* **Spring 2024**

- Implemented an intelligent agent leveraging advanced AI techniques, including Minimax search and Monte Carlo Tree Search, that achieved a 90% win rate against human players.
- Optimized the performance of the AI agents through strategic move ordering, significantly reducing computational overhead by 50% and improving decision-making efficiency by the AI.

**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, querying and analysis of a comprehensive dataset, encompassing 1000+ workouts and 200,000+ repetitions, to meticulously train the algorithm.

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

- Developed a robust image search and dashboard design using REST API and 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.

**Personal Photography Portfolio** | *HTML, CSS, JavaScript, React* **Fall 2022**

- Crafted a visually stunning and responsive website using UX/UI design principles that showcased varying photographic styles, resulting in a 50% increase in user engagement.
- Employed SEO best practices to improve search engine rankings, resulting in a 30% increase in organic traffic and attracting a wider audience to the portfolio.

## Non-Technical Experience

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**Physical Therapist Aide Lead** | *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 teach and streamline information, resulting in a 25% increase in patients' ability to self-manage their treatment regimens.
- Implemented and initiated strategic solutions that improved patient turnover by 10% during peak occupancy, demonstrating adept problem-solving skills in managing high-demand scenarios.

## Education

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- M.S. Computer Science, *Southern Methodist University* **Expected Graduation: May 2026**
- B.S. Public Health, *University of California San Diego* **Graduated**