Miguel A Castillo

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EDUCATION

Rutgers University-New Brunswick, NJ   **Graduated May 2024**

Bachelor of Computer Science

- **Skills**: Python, C++, JavaScript, C#, HTML, React, Java, JDBC, Z Shell, Django, R, Tailwind , SQL, Data Analysis, MsSql, Command Prompt
- **Languages**: English (Fluent), Spanish (Fluent)
- **Relevant Coursework**: Data Structures (210), Intro To Artificial Intelligence(440), Design and Analysis of Computer Algorithms (344), Principles of Information and Data Management (336), Data Management for Data Science (210)
- **Honors**: Educational Opportunity Fund (EOF) Scholar

PROJECTS

Flight Travel Reservation System   **October 2023**

Rutgers CS 336- Fall 2023

- Engineered and constructed a relational database system to empower an online travel reservation platform, leveraging MySQL. Conceptualized and crafted an Entity-Relationship (ER) diagram for an insightful database structure, honing data modeling proficiency.
- Executed SQL schemas and fortified integrity constraints, ensuring precision and reliability of data. Employed Java, HTML, SQL, and CSS to establish seamless connectivity between the user interface and the database.
- Collaborated effectively within a dynamic four-member team, showcasing exceptional teamwork and adept project management.
- Demonstrated mastery in database design, SQL programming, and web development, resulting in the successful delivery of a fully operational travel reservation system.

Grid World Pathfinding Algorithms   **May 2024**

Rutgers CS 440- Spring 2024

- Conducted comprehensive analyses of pathfinding algorithms, including Repeated Forward A* and Adaptive A*, exploring the impact of heuristic consistency and tie-breaking strategies on runtime and cell expansions.
- Proved theoretical guarantees of agent reachability and finite-time completion in grid worlds using mathematical arguments and conducted statistical hypothesis tests to confirm performance differences between algorithms.
- Leveraged advanced concepts like Manhattan distance consistency and adaptive heuristics to enhance search efficiency while rigorously evaluating performance through detailed experimentation and visualization.

WORK EXPERIENCE

Triple Five Group   **June 2019 – January 2020**

American Dream Nickelodeon Ride Operator

- It requires reaching at or below and occasionally above shoulder level, frequent pushing/pulling, stooping/squatting, and occasional lifting/carrying of up to 10 pounds.
- Proficient in utilizing microphones to convey instructions and address guest concerns. Demonstrated ability to positively interact with guests both verbally and non-verbally, ensuring an outstanding experience. Highly vigilant in visually and audibly observing safety and guest concerns while operating rides and attractions.

Online Entrepreneurship   **September 2016 – Present**

- Strategically expanded the enterprise by continuously reinvesting profits into acquiring essential tools and incrementing the inventory. Recognized the potential in sourcing, repairing, and reselling a diverse range of products, including clothing and collectibles.
- Executed multifaceted roles, covering sourcing, cleaning, and repairing items, as well as conducting professional photography for product listings. Frequently traveled from New Jersey to New York City to participate in exclusive release events, expanding the business's inventory.
- Built strong relationships with a diverse customer base, offering top-tier service, and promptly addressing their inquiries and concerns. Maintained a solid reputation for reliability and professionalism.