**ALEJANDRO MORALES**

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**EDUCATION**

**B.S Computer Science December 2025**

Florida International University; Miami; GPA: 3.9

* Relevant Coursework: Algorithms and Data Structures, Systems Programming, Software Testing, Capstone 1

**TECHNICAL SKILLS**

Languages and Frameworks: C++, C, Python, Javascript, Java, React Native, Postgresql

Tools: Visual Studio Code, Eclipse, IntelliJ, PowerBi, pgAdmin

**EXPERIENCE**

**COGNAC Research Lab at Florida International University** | Miami **September 2023 - Present**

*Research Lab Assistant*

* Developed a semantic database of 1,000+ event-related terms, collaborating with a team to enhance communication and contribute to training of an NLP machine-learning model.
* Transformed data from JSON to CSV using Python, preserving sentence-event relationships and facilitating seamless model training.
* Engineered a Python script to chunk text for optimal training efficiency, achieving a 10% increase in the model's F1 score, while also fine-tuning model parameters to boost overall performance from 64% to 73%.

**IT Department, Miami Dade County** | Miami **May 2024 - June 2024**

*Data Science and Business Intelligence Intern*

* Devised a Python script to extract data from a PDF from the Corrections Department, accomplishing significant time savings as deliberated by reduced manual extraction effort.
* Leveraged Power BI to analyze data from the Corrections Department, obtaining insights into resource allocation trends as shown by identified key patterns.
* Designed a linear regression graph to predict outcomes based on historical data, attaining valuable insights for decision-makers as supported by increased strategic planning within the department.

**PROJECTS**

**Parkeasy Web App April 2024 - Present**

* Developed the server and API endpoints for frontend requests, obtaining seamless backend-frontend and database connectivity with React Native and JavaScript, as supported by improved data handling and user experience.
* Designed a Python web scraper to collect real-time parking data and implemented a C++ algorithm to rank campus parking areas based on user preferences, enhancing customization and receiving positive team feedback.
* Managed project management using Monday.com and the Scrum framework, showcasing effective leadership and collaboration in delivering robust software solutions.

**Clite Lexer October 2024 - Present**

* Crafted a detailed flowchart for the lexer prototype, outlining token generation and lexeme processing for the Clite grammar, ensuring clarity in lexical analysis process.
* Implement lexer source code in C++, accomplishing robust functionality to accurately generate tokens and lexemes from sample input files.
* Test lexer with various source code samples to ensure comprehensive coverage of all branches and functionalities, demonstrating its effectiveness and robustness in handling different input scenarios.

**LEADERSHIP/AFFILIATIONS**

* Recipient of the Florida Medallion Scholar Award in 2021 and the Honors College Fellows Award from 2021 to 2023, recognized for exceptional academic performance, dedication to student success, and contributions to community engagement.