

# Javier Arango

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## Education

### University of Florida

Bachelor of Science in Computer Science

Relevant Coursework: Application of Discrete Structures, Advanced Programming Fundamentals

Expected Graduation: August 2023

Gainesville, FL

### Miami Dade College

Associates Degree in Computer Science

Relevant Coursework: Intro to C++ Programming and Java Programming

August 2017 – August 2020

Miami, FL

## Technical Skills

**Languages:** Java, C++, Python, JavaScript, HTML/CSS, MySQL

**Tools:** Git, Jupyter Notebook, Selenium, SQLite3, Seaborn, Scikit-Learn, NumPy, Pandas, Matplotlib, Folium, SFML

**Others:** Bilingual (English & Spanish)

## Projects

### Image Compression: Java

September 2021

- Implemented a lossless compression form to take advantage of datasets where elements such as bytes or characters repeat several times in a row in certain types of data such as pixel arts
- Developed routines to encode and decode raw data for images using run-length encoding

### Class Attender Bot: Python, SQLite3, Selenium

June 2020

- Developed a python bot to automatically join online classes on time, depending on a schedule
- Used Selenium for controlling the web browser and performing browser automation
- Created a local database using SQLite3 to store course names and schedules internally

### Housing Price Prediction: Python, Jupyter Notebook, NumPy, Seaborn, Scikit-Learn, Matplotlib, Folium November 2020

- Developed a program to help college students to find the best prices of rent in Gainesville, FL
- Collected the prices data using Foursquare API and Realtor API and used Pandas for data analysis, allowing various data manipulation operations such as merging, reshaping, selecting, data cleaning, and data wrangling features
- Visualized the data with Matplotlib and Folium to show the key points of the data and used NumPy, Seaborn, and Scikit-Learn libraries to make a Clustering Model gather data points into smart groups or segments based on their attributes

### Image Processing: C++

December 2021

- Developed a program to process images with different blending modes such as multiply, subtract, overlay, and screen
- Used C++ to read the data from binary files, processed the data using Photoshop blending algorithms and wrote the result into a new binary file (.TGA)

### Minesweeper Game: C++, SFML

December 2021

- Recreated the classic game Minesweeper with all the original features such as scoreboard, randomized mine placement, revealing neighbors, cascading neighbors, and flagging tiles. Added new features such as debugging button and two test buttons to initialize the game using a preloaded board from files
- Developed the game using C++ and the library SFML to create a simple user interface
- Used the singleton design pattern to restrict the instantiation of the game object to one single instance and be able to use the same data in different objects

## Certifications

**IBM Data Science Specialization:** Develop hands-on skills using the tools, languages, and libraries used by professional data scientists.