

# Alejandro Garcia

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## Education

**University of San Francisco, San Francisco, CA**

**August 2017-May 2020**

*B.S in Computer Science, GPA:3.6*

**Miami Dade College, Homestead, FL**

**August 2015-May 2017**

*Associate in Arts*

## Relevant Courses

- Data Visualization
- Operating Systems
- Computer Architecture
- Software Development
- Introduction to Parallel Computing
- Data Structures & Algorithms

## Projects

### **Interactive Visualization**

- A faculty research project that explores ways of creating a more reciprocal and user-friendly interactive bar chart app
- Used Android Studio to build the mobile app allowing the implementation of the MPAndroidChart library to design and display graphs based on real-life datasets
- Featured implementations: sorting button, stacked-bar histogram, mini-view, and outlier detection

### **The Crucible**

- A team capstone project that uses JavaScript and TypeScript to create an environment for AI's to train themselves and allow users to play an online game of tag
- We developed the features of the environment such as game physics, rules, game features (obstacles, player customization, game fog, etc.), port/socket connections and UI of the game
- Implemented a quadtree to be used for the collision detection of the players which allowed the comparison for finding player collisions to become  $O(\log n)$  instead of  $O(n^2)$

### **Search Engine**

- A Java-based search engine that can process user input queries in-memory and output ranking based results on a web page.
- Implemented a web crawler that parses text and strips HTML using regex then optimized it with multithreading on the parsing work queues
- Used sockets in combination with a Jetty based server to get input and display on the results in a browser

## Technical Skills

- **Programming languages:** Java, Python, C, GO, C#
- **Website design:** JavaScript, D3.js, Node.js, Express.js, HTML/CSS, TypeScript
- **Editing software:** Adobe Photoshop, Premiere Pro, Lightroom
- **Tools & Environments:** MongoDB, Eclipse, IntelliJ, Visual Studio, Android Studio, Tableau, Terminal, VM, Git

## Work Experience

**CS Tutor: USF Computer Science Department, San Francisco, CA**

**August 2019-May 2020**

- Assisted students in their labs/projects and ensured better understanding of concepts

**Research Assistant: USF Computer Science Department, San Francisco, CA**

**March 2019-May 2020**

- Implemented/researched new features for a Data Visualization project alongside a CS Faculty
- Attended weekly meetings to discuss new features to implement and to showcase progress

**Teaching Assistant: USF Computer Science Department, San Francisco, CA**

**January 2019-May 2019**

- Assisted teachers in daily class operations and aided students with any questions
- Graded labs/projects and provided weekly office hours to help students in their assignments

## Profile

- Born in Miami, Florida
- Bilingual: English & Spanish
- Participated in Missionary work in Panama and Nicaragua
- Hobbies: photography/filmmaking, video editing, and video game development