JOSUE ARREAGA

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EDUCATION

Bachelors in Computer Science   **Jul 2024**

Florida International University; Miami, Florida
- Current GPA: 3.9

Associate of Arts in Mathematics   **Jun 2020**

Miami Dade College; Miami, Florida
- Graduated with Highest Honors

EXPERIENCE

Software Engineering Researcher   **Jan 2024 – Current**

Florida International University; Miami, Florida
- Partnered up with Miami Children's Hospital to create a mobile application for the analysis of children's interactions with neurological disorders
- Worked alongside FIU faculty professors to engineer a mobile application in React Native with speech-to-text transcription, sentiment analysis, LLM models, and algorithm analysis to determine patient progression

Software Engineering Intern   **May 2023 – Aug 2023**

Omics Informatics; Honolulu, Hawaii
- Created one interface to facilitate the users sorting and exporting of desired data saving 5 Gigabytes of space
- Connected one API to a pipeline to remove third-party applications, simplifying the user interfaces by 33%

Teacher Assistant & Mathematics Tutor   **Mar 2019 – Apr 2023**

Miami Dade College Ernesto Padron Campus, Educational Services of Miami; Miami, Florida
- Facilitated the learning of students on Calculus 1-3, Differential Equations, Discrete Mathematics, Linear Algebra, Precalculus, and Trigonometry
- Guided groups of up to ten students, and held on one-on-one tutoring sessions to assist in Mathematics
- Led in-class learning for Calculus 1 - 2, Precalculus, and Trigonometry at Miami Dade College
- Hosted Peer-Led Team Learning (PLTL) for Trigonometry, Pre-calculus, and Calculus three times a week alongside fellow tutors to teach groups of ten students mathematical subjects and answer any doubts

PROJECTS

Blockudoku Engine (Java Development)   **May 2023**
- Developed one engine strong enough to outplay humans in Blockudoku consistently with a 1,000 game analysis
- Tested over 10,000 runs to optimize engine parameters and determine the strength, mean score, standard deviation, and margin of error

Personal Website (Web Development)   **Feb 2023**
- Developed with 74 % HTML, 24% CSS, and Bootstrap to run as a static website hosted through GitHub
- Notable features included are: a navigation bar, a carousel, and a contact form. This website is 100% responsive and works perfectly on Tablets, Laptops, and Desktops

Scrollable Apps (Mobile Development)   **Aug 2022**
- Created through Android Studio with Kotlin to implement view-binding features for scrolling like in Instagram
- Implemented one on-click listeners and two different class activities to travel from page to page

Classic Mario (Game Development)   **Jun 2022**
- Programmed through Unity using the asset store, state animations, and vector logic for character movements
- Incorporated abstract classes to create a shop system, static variables to keep track of currency, and singleton patterns for data persistence and triggers. One hundredth percent Mobile-Friendly

RELEVANT TECHNICAL COURSEWORK

- Data Structures, Operating Systems, Database Management, Systems Programming, Principles Of Programming Languages, Principles Of Software Engineer, Fundamentals Of Software Testing, Computer Architecture, Statistics for Computer Science, Theory Of Algorithms, Graph Theory, Discrete Mathematics, Calculus One - Three, Differential Equations, Linear Algebra, Java, C#, C++, C, CSS, HTML, Python, Kotlin, Lisp, Scheme

LEADERSHIP

- Representee of Florida International University at Henry Ford Social Impact Innovators Challenge (Ongoing)