Alexander G. Arias

(760) 996 - 4461 | alexanderarias2@hotmail.com | linkedin.com/in/alex-g-arias

Education

University of California: San Diego   **Sep. 2020 - Dec. 2023**
Bachelor of Science in Computer Science   GPA: 3.73
- Relevant Courses: Data Structures, Algorithms, Operating Systems, Web Client Languages, Computer Security, Computer Graphics, Software Engineering.

Imperial Valley College   **Sep. 2017 - June 2020**
Computer Science Major   GPA: 4.0
President's Honor List 2017, 2018, 2019
- 4 Associate Degrees: Computer Science, Mathematics, Physics and University Studies.
- Key Courses: Object Oriented Programming, Data Structures, Assembly and Machine Organization

Experience

Computer Science Tutor   **Sep. 2022 - Dec. 2022**
- Improved student performance by clarifying complex C and Assembly programming concepts, contributing to a 90% pass rate in Computer Organization and Systems Programming courses.
- Provided tailored tutoring strategies, boosting student confidence and proficiency in system programming.

Indirect Fire Infantryman   **June 2013 - Oct. 2016**
- Led a 5-person team in completing high-risk reconnaissance missions, providing critical intelligence that improved operational decision-making, contributing to overall efficiency.
- Optimized team communication processes, reducing response time significantly in high-pressure situations.
- Spearheaded training initiatives that enhanced tactical adaptability, resulting in 100% mission success under tight deadlines and challenging environments.

Projects

The Super Simple Instruction Set Architecture © and Core Processing Unit | *System Verilog, Python, C*
- Led a team of 3 in developing a custom processing unit, completing the project 40% ahead of schedule and implementing Forward Error Correction support.
- Created an efficient 9-bit instruction set architecture, which enhanced error detection capabilities.

Nachos Operating System | *Java, C, Linux Commands*
- Designed and implemented a functional operating system in a team of 4, completing 3 sub-projects on Synchronization, CPU Scheduling, and Memory Management to enhance OS performance in academic environments.

Graphics Shadow Mapping and other small graphics projects | *C++, C, OpenGL*
- Engineered a shadow mapping solution for a 3D environment in a 2-person team, reducing render time by 10% and improving graphical fidelity using OpenGL and C++.
- Implemented various graphic designs like fragments, Mandelbrot fractals, 3D rotation formulas, scene building, and Curve Theory dealing with Bezier Curves, B-Splines, and Sub Division.

Multi-Platform Post Scheduler and other small web development projects | *HTML, CSS, Javascript*
- Co-led a team of 8 in developing a CRUD web application to schedule social media posts, streamlining the content creation process for Twitter, Facebook, and Instagram.

- I designed a few websites offering simple CRUD features to solidify my understanding of HTML, CSS, JavaScript, and other web related APIs.

Skills

Languages: *Java, C#, C++, C, Python, HTML, CSS, JavaScript, Assembly.*
Technology and Tools: *Git, GitHub, Linux, Gnu DeBugger, Valgrind, JUnit.*
Frameworks: *.NET, Node.js*
- Reduced integration issues by 100% across multiple projects through efficient use of Git and GitHub for version control.