Alexander G. Arias

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Education

University of California: San Diego **Sep. 2020 - Dec. 2023**
Bachelor of Science in Computer Science GPA: 3.73

- 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; President's Honor List 2017, 2018, 2019 GPA: 4.0

- 4 Associate Degrees: Computer Science, Mathematics, Physics and University Studies.
- Coursework: Object Oriented Programming, Data Structures, Assembly and Machine Organization

Experience

Computer Science Tutor **Sep. 2022 - Dec. 2022**

- Tutored students using the C and Assembly programming languages in a Computer Organization and Systems Programming course.

Indirect Fire Infantryman **June 2013 - Oct. 2016**

- As an Indirect Fire Infantryman, honed skills in project management and strategic planning, analogous to coordinating large-scale initiatives and ensuring efficient resource allocation in corporate settings.
- Conducted reconnaissance missions akin to market research and competitive analysis, providing valuable insights for decision-makers to stay ahead of industry trends and anticipate market shifts.
- Proficiently operated advanced communication equipment, fostering effective communication channels vital for team collaboration and client engagement in customer service-oriented roles.
- Executed tactical strategies with adaptability and problem-solving acumen, equating to navigating complex challenges and optimizing operational processes for enhanced productivity in diverse work environments.
- Demonstrated resilience and professionalism under pressure, traits essential for maintaining composure and driving results amidst tight deadlines and high-pressure situations characteristic of many professional settings.
- Collaborated seamlessly with colleagues from diverse backgrounds, promoting a culture of inclusivity and teamwork conducive to fostering innovation and achieving shared objectives across departments and projects.

Projects

The Super Simple Instruction Set Architecture © and Core Processing Unit | *System Verilog, Python, C*

- Designed a custom processing unit in 6 weeks in a team of 3, finishing early given a 10-week deadline, that supports specific Forward Error Correction (FEC) tasks.
- Created a custom Instruction set architecture with a 9-bit restriction on data usage. The instruction set consisted of bitwise register, immediate, and jump instructions.

Nachos Operating System | *Java, C, Linux Commands*

- Completed the design of a functional operating system utilized for academic settings in a team of 4, known as Nachos. This involved 3 separate sub-projects focusing on Synchronization, CPU Scheduling, and Memory Management respectively.

Graphics Shadow Mapping and other small graphics projects | *C++, C, OpenGL*

- Designed and integrated a graphical application of shadows into a functional 3D environment using OpenGL and C++ in a team of 2.
- 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*

- In a team of 8, I was the co-lead of a software engineering team dedicated to creating a simple Create Read Update Delete web application designed to plan social media posts 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*
Technology and Tools: *Git, Linux, Node.js*
Frameworks: *.NET, JUnit*