David A. Vasquez

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Education

The University of Texas at El Paso

Bachelor of Science in Computer Science — Expected Graduation: May 2024

Relevant Coursework — Overall GPA: 3.26

Machine Learning |Data Mining |Data Structures| Discrete Mathematics| Digital System Design | Advanced Object-Oriented Programming| Software Engineering

Project Experience

ARCANA Project *JavaScript, React, Python* — October 2023 – Present

- Collaborated within a project team, applying JavaScript, React, and Python to implement key functionalities in ARCANA, enhancing event analysis.
- Implemented JavaScript algorithms for data parsing in ARCANA, contributing to event node creation and enhancing project capabilities.
- Contributed to the ARCANA project's goals of improving analytical workflows and observational reporting for cyber threat analysis.

University Writing Center Queue Web App *JavaScript* — June 2023-Present

- Developed a web application for The University of Texas at El Paso Writing Center to automate consultant assignment into a queue, significantly enhancing the efficiency of their existing system.
- Collaborated closely with the assistant director on a weekly basis to incorporate their specific requirements and feedback into the web application's design and functionality.
- Designed an intuitive and user-friendly interface tailored to meet the needs of the staff, streamlining the queue management process.
- Responsible for the front-end development of the website, ensuring it aligned with the center's unique requirements and branding.

Fithub *JavaScript* — January 2023-July 2023

- Developed a comprehensive fitness tracking web application that allows users to record and monitor their fitness progress and goals by logging various workouts and associated weights.
- Utilized JavaScript, HTML, and CSS to build both the front-end and back-end components of the application ensuring a seamless user experience.
- Collaborated effectively within a team, employing agile methodologies to enhance project workflow, encourage iterative development, and maintain a responsive development process.
- Demonstrated proficiency in full-stack development, encompassing both user interface design and back-end functionality.

Customer Purchasing Interface *Java* — October 2022-January 2023

- Developed a secure customer-centric program enabling users to register with secure login credentials and make purchases of items, event tickets, subscriptions, and more.
- Utilized UML case, state, and class diagrams to meticulously plan and map out the code, ensuring a well-organized and efficient implementation.
- Leveraged object-oriented programming principles to create a versatile system that allowed users to utilize their currency for the purchase of event tickets and other items.
- Implemented industry-standard design patterns such as singletons and design factories to enhance the codebase's structure and behavior, resulting in a more maintainable and scalable application.
- Demonstrated expertise in software design, creatively combining technical proficiency to build a robust and user-friendly application.

Word Relation Game Solver *python* — May 2022

- Created a program, when given two words will find the connection, if there is one, changing one single letter at a time.
- This program reinforced my knowledge of data structures by implementing Depth first search and Dijkstra's Algorithm.

Sudoku Solver *python* — May 2022

- Created a program, that can solve any sudoku by a back tracking algorithm.
- By making the back tracking non-recursive, the code improved its time and space complexity, lowering the runtime by 30%.

Organizations & Community Service

Coding Interview Club *Member* — August 202 – November 2022

- Solved dozens of interview style questions to strengthen problem solving skills and coding skills as well as broadening my abilities to apply different techniques to various situations.
- Attended weekly meetings to prepare for technical interviews

Montwood Highschool STEM Tutor *Volunteer* — January 2020- Present

- Hosted and taught high school level training sessions in coding language Java
- Aided students in technical homework pursing STEM field degrees

Work

Code Ninjas Coding Tutor — January 2023 – Present

- Guide children aged 6 to 14 in building games using Unity with C#, fostering a solid foundation in computer programming fundamentals.
- Cultivated problem-solving, critical thinking, and STEM skills in an engaging and secure learning environment.
- Evaluated and graded assignments to track students' progress and provide constructive feedback.

University Writing Center W*riting Consultant* — August 2022- Present

- Assist students at The University of Texas at El Paso with any writing assistance they may need with APA, MLA, and Chicago style formatting.
- Lead, present, and developed workshops designed to help students with academic and professional development skills

Skills

Programming Languages: Java, JavaScript, CSS, Python, C, PHP, Lua, C#

Development Tools: UML (Class, Use, State),Electron, Git, Firebase, SQL