Christian Vaughn

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SUMMARY

Software Engineer with 1.5 years of experience in backend development, Typescript, Python, APIs, databases. Skilled in developing, testing, and deploying software. Proven ability to design effective and efficient architecture solutions.

EXPERIENCE

Software Engineer II, Backend

Keiser Corporation **August 2023 - Present, Fresno,CA**

Software Engineer, Backend

Keiser Corporation **August 2022 - August 2023, Fresno, CA**

• Designed, developed, and maintained robust API and backend tools utilizing JavaScript and TypeScript, ensuring seamless integration and optimal performance.
• Designed and implemented OpenAPI data-driven code generation solutions to automatically generate client SDKs from existing APIs, streamlining development processes.
• Leveraged AWS for efficient cloud deployments and infrastructure management, optimizing system performance and scalability.
• Working in an agile development environment and with a cross-functional team to coordinate and implement the delivery of product features and bug fixes, with a focus on quality, cost, speed, and customer satisfaction.

Software Engineer

Computer Systems Plus **April 2022 - August 2022, Fresno, CA**

• Developed cutting-edge server automation and management software as a contractor, streamlining operations and enhancing productivity.
• Engineered a comprehensive solution to process repair estimates from auto body shops, enabling seamless integration of sales and price adjustments.
• Automated the upload of updated estimates to a user-friendly online portal, simplifying the parts ordering process for auto body shops.
• Implemented efficient automation solution for multiple clients, resulting in a 40% reduction of manual processes and improved efficiency of customer service resolution by 95%.

Lab Instructor

California State University Fresno **August 2021 - December 2021, Fresno, CA**

• Served as the Lab Instructor for CSCI 41 Data Structures and CSCI 115 Algorithms and Data Structures courses, promoting student growth and understanding.
• Prepared and delivered engaging, hands-on lab sessions to enhance student comprehension of complex data structures and algorithmic concepts.
• Provided one-on-one support to students, clarifying course material and addressing individual learning needs to ensure academic success.
• Administered pre and post assessments to measure effectiveness and impart a better understanding of fundamental computer science principles.

Software Engineer, Frontend

California State University Fresno **July 2020 - December 2020, Fresno, CA**

• Research Software Engineer on a grant-funded project in collaboration with the university's Math Department, focusing on the development of an adaptive web application for math quizzes and homework.
• Contributed to the design and implementation of dynamic, personalized content that adjusted based on student performance, enhancing learning outcomes by using HTML and JavaScript to connect with the server-side API.
• Conducted preliminary research on math problem generation and solvability verification, advancing the application's effectiveness and accuracy.

PROJECTS

Towards Local Training of Artificial Neural Networks for Supervised Learning

• Conducted research on local learning neural networks, a biologically plausible and energy efficient approach.
• Proposed a novel method that integrated concepts from transformers, associative learning, and Hebbian learning to tackle classification tasks.
• Developed a custom neural network model using a reflex-based Generalized Hebbian Algorithm.
• Demonstrated faster training and comparable accuracy with existing learning rules.
• Progressed towards the completion of a research paper, currently in development, to showcase findings through publication.

Parallel Divide-and-Conquer Algorithm for Generalized Matrix Multiplication

• Collaborated in a group research effort to devise a more efficient generalized matrix multiplication algorithm.
• Implemented a parallel divide-and-conquer approach for general matrix multiplication in Python, leveraging matrix. partitioning and GPU computation with CUDA.
• Outperformed existing generalized matrix multiplication algorithms, showcasing the potential for practical applications.
• Presented the research and its noteworthy findings at the CSU Fresno HIP Symposium.

Disease Simulation Project: Modeling Spread and Impact Factors

• Collaborated in a group project to develop a comprehensive disease simulation for a fictitious illness as part of a simulations course at Fresno State.
• Modeled the transmission dynamics, incorporating various factors influencing the spread and mortality rate of the disease.
• Conducted extensive simulations to analyze the effectiveness of containment strategies and the potential impact on public health.
• Presented findings to peers and faculty, promoting awareness and understanding of disease management and prevention strategies.

Halo Online Fileshare

• Developed and maintained a full stack project for the Halo Online video game allowing players to view and download custom maps.
• Created and maintained a website to view game match statistics with an API to display stats, ranks, and profile pictures in game or during gameplay.
• Developed a robust database of players and statistics, resulting in increased engagement and user experience.
• This project reached over 1,000 visitors per month.

EDUCATION

Masters of Computer Science

California State University Fresno • Fresno, CA • 2022 • 3.55

Bachelors of Computer Science

California State University Fresno • Fresno, CA • 2020 • 3.5

SKILLS

Languages: Python, Javascript, Typescript, C++, SQL

Technical Skills: API, NumPy, PyTorch, Pandas, scikit-learn, OpenAPI Codegeneration, Git, Github, Unix, Linux