Christian Vaughn

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SUMMARY

Software Engineer with 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

Fullstack Software Engineer

Computer Systems Plus **April 2024 - Present, Fresno, Ca**

- Developed a robust fullstack software application
- Implemented dynamic user interface elements with Svelte Kit, improving system navigation and providing fast load times
- Developed and deployed a local inventory management system, utilizing modern Typescript and back-end frameworks (ElysiaJs), to provide a fully type safe system from the database to the front end

Software Engineer II, Backend

Keiser Corporation **August 2023 - April 2024, Fresno, CA**

- Engineered WebSocket powered APIs to support real time communication between mobile applications and strength training equipment.
- Implemented robust Continuous Integration/Continuous Deployment pipelines utilizing GitHub Actions, ensuring consistent and efficient API releases to cloud infrastructure.
- Developed automated workflows using CI/CD pipelines to publish client SDKs across multiple programming languages via GitHub Actions, expediting deployment.

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.
- Developed automated grading systems leveraging C++ and Bash scripting. Programmed and designed various labs to assign to students.

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

Unggoy - Halo Infinite UGC Browser

www.unggoy.xyz/

- Engineered a robust Rest API and user-friendly front-end platform to navigate Halo Infinite's user-generated content, enabling gamers to share, and discover custom game files seamlessly.
- Developed a type safe backend utilizing Elysia JS and SvelteKit reactive front end.
- Implemented a secure OAuth 2.0 login system integrating Microsoft Entra ID enhancing user authentication security.

Actionhero Auto SDK Generator

- Enhanced the Actionhero framework by developing an advanced JavaScript and TypeScript SDK extension for generating client SDKs.
- Developed an automated process for creating customizable SDKs in varied languages using OpenAPI standards, improving development flexibility.
- Designed and integrated efficient connection libraries into SDK generators, enabling support for both WebSocket and HTTP, enhancing adaptability.
- Streamlined developer workflow by eliminating the need to maintain SDK repositories for various client programming languages, utilizing automated code generation tools.

An Efficient Parallel Divide-and-Conquer Algorithm for Generalized Matrix Multiplication

ieeexplore.ieee.org/document/10099141

- 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 and published the research and noteworthy findings at the IEEE Annual Computing and Communication Workshop and Conference.

Halo Online Fileshare

- Developed and maintained a full stack project for a shooter 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

Bachelors of Computer Science

California State University Fresno • Fresno, CA • 2020

SKILLS

Languages: Python, JavaScript, Typescript, SQL, MySQL, Postgres

Technical Skills: Rest API development, NumPy, PyTorch, Pandas, scikit-learn, OpenAPI Code generation, Git, GitHub, GitHub Actions, Unix, Linux, Elysia, Express, CI/CD Pipeline, Docker, Redis, Cloudflare