william.tucker29@gmail.com
(615) 881-2686

WILLIAM TUCKER

FULL STACK SOFTWARE ENGINEER

SKILLS

Programming Languages: JavaScript, Python

Cloud Deployment and Technologies: DevOps, Docker, Git, feature branch workflow, AWS (EC2), GCP

Database Concepts and Technologies: SQL, NoSQL,PostgreSQL, MongoDB, Entity Relationship Diagrams, Database scaling, Mongoose, Redis

Server-Side Concepts and Technologies: NodeJS, Express.js, MVC, Stress Testing & Scalability, Postman

Client-Side Concepts and Technologies: HTML5/CSS3, DOM & DOM API, Event Listeners, ReactJS, AJAX / Fetch, Component-Based Architecture

Fundamentals of Computer Science: Data Structures, Algorithms, Object-oriented design, ORM/ODMs

EMPLOYMENT AND PROJECT HISTORY

2024

Full Stack Engineer

QuickWiz

Developed and executed a full stack quiz and trivia application within a tight 2 day timeframe, showcasing rapid ideation and implementation skills

• Leveraged Vite to efficiently serve client files, coupled with an Express.js middleman server to seamlessly interact with the Open Trivia Database API, ensuring smooth data retrieval and integration

• Prioritized user experience by crafting SQL queries optimized for lightning-fast response times of 10ms, while maintaining a clean and responsive front-end design to enhance usability

Skoolhub

Interfaced with a team of 8 developers in an AGILE environment to conceptualize, develop, and deploy the application

• Orchestrated PostgreSQL database creation & intricate server routes configuration, maneuvering through complex inter-table relationships, while maintaining query times below 25ms

• Improved teachers' ability to manage class lists & track student grades, presenting data in a visually pleasing manner using Chart.js and Framer

Atelier

Reduced latency from 45ms to 6ms and increased throughput from 100 RPS to 10000 RPS by implementing an Nginx load balancer and caching

• Optimized SQL queries using indexes and UUIDs to improve query response time by 500%

• Deployed three EC2 micro instances behind an Nginx load balancer to sustain 1000 RPS, a 900% increase in throughput.

• Developed a product overview widget utilizing React and CSS consisting of 5 components enabling customers to seamlessly navigate products without a page refresh

• Maximized performance by preloading & throttling API requests generating an FCP of 0.3s & Speed Index of 0.9s.

• Implemented field validation to eliminate bad API requests for product selection and purchase by 100%

JAN 2016 - JAN 2024

Mechanical Engineer 3, Nissan North America, Nashville, TN

Lead for model responsibility - analyzing, troubleshooting, and directing all incidents of defects, bugs, or suboptimal performance to design and implement the necessary engineering solution and countermeasures across key teams

• Reported product efficiency and optimization reports to senior leadership on a monthly cadence, with the goal of highlighting emerging and escalating issues

• Identified and researched field incidents related to customer satisfaction. Designed and implemented robust engineering solutions and counter measures to optimize critical aspects of vehicle quality and the driving experience

• Monitored, analyzed, and coordinated warranty and quality targets and outcomes for Versa and Kicks models on a monthly cadence to ensure that Nissan’s field quality goals were met with the goal of exceeding customer satisfaction targets

• Continuously led integration meetings between engineering stakeholders – including manufacturing, suppliers, and design teams – to troubleshoot and creatively respond to product issues while increasing efficiency

• Led an investigative team to research water quality in international manufacturing plants in order to preemptively improve the quality of the vehicles in the production process

• Led Nissan's "JD Power" Quality Customer Survey for the Ariya task force – a robust survey collecting data on every component of product and feature performance

• Coordinated with local and international design teams to address customer feedback to optimize the quality of the product and the model launch

• Successfully achieved full coverage of top quality and performance issues during tenure by accurately identifying and creatively resolving engineering process gaps

• Performed comprehensive product and feature quality audits of products engineered by international manufacturers.

• Acquired additional certification and expertise in high voltage battery components to increase depth and understanding of the Ariya EV for performance optimization purposes

• Team lead for Ariya cold-weather performance and quality

Mechanical Engineer 2, Nissan North America, Nashville, TN

Coordinated with a cross functional team - including manufacturing, design, and suppliers, to ensure a smooth and successful model launch

• Acquired expertise in the full spectrum of the product and its features. Lead the identification and analysis of troubleshooting fixes in quality and performance throughout the duration of the task force and the product launch

• Researched, investigated, and synthesized a wide breadth of performance and quality issues, including warranty claims, parts returns, and field reports to identify micro and macro performance and efficiency issues for product optimization prior to, and immediately following, launch

• A key member of the product launch team – traveling internationally to provide expertise in the initial quality check of the product prior to launch date

• A key driver in ensuring the efficient use of resources and performance metrics to meet 6 month completion deadline for task force closure and product launch

Mechanical Engineer 1, Nissan North America, Nashville, TN

Systematically reviewed quality of design and performance for body and exterior components for all vehicles manufactured in North America

• Monitored all warranty issue mitigations, analyzing for defects as well as opportunities for optimization and efficiency

EDUCATION

JAN 2024 - APR 2024

Advanced Software Engineering Immersive Program, Hack Reactor

DEC 2022 - DEC 2022

Master's in Business Administration, Tennessee Technological University

DEC 2015 - DEC 2015

Bachelor's of Science in Mechanical Engineering, Georgia Institute of Technology

LINKS

Github

LinkedIn