WILLIAM TUCKER

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Personal Website | GitHub | LinkedIn

Background

Versatile and results-driven tech professional with 9 years of engineering experience and a strong track record in building scalable,high-performance solutions. Skilled in full-stack development, system optimization, and improving user experience. Known for leading end-to-end projects, collaborating across teams, and delivering secure, efficient architectures in fast-paced environments.

Experience

Software Developer, MindClub America, Franklin TN   Aug 2024 — Present

Enhance platform security by implementing authentication flow for securing user identity and access across the application. Engineer platform-wide user access controls to aid client-specific customization and multi-tiered permissions. Create mental health dashboards with mood tracking, sleep monitoring, and arousal-state regulation via PHP backend with JavaScript frontend. Build a responsive landing page with integrated health analysis tool to support therapeutic intake for Reentry to Recovery's incarcerated user base. Expand platform reach by redesigning the company website and dashboard UI for modern, mobile-optimized usability and modular marketing presentation.

Key Contributions:

- Rebuilt enterprise eLearning platform from the ground up using JavaScript and React, reducing First Contentful Paint (FCP) from 4.5s to 0.8s and Speed Index from 3.7s to 0.7s, significantly enhancing performance and user experience.
- Designed and deployed real-time mental health dashboards with features including mood tracking, sleep monitoring, habit logging, and anxiety regulation tools, integrating JavaScript front-end with a PHP backend.
- Drove platform monetization by implementing a tiered subscription model with Stripe integration and paywall functionality, transforming static content into recurring revenue streams.
- Led full-stack migration of enterprise eLearning platform from PHP to a modern JavaScript/TypeScript architecture with React frontend, Node.js backend, and MySQL database, enhancing performance and scalability.
- Improved development speed and user experience by managing legacy PHP system and delivering feature-rich usage for METRIC users.
- Converted static content into revenue-generating assets by applying a tiered Stripe-based subscription model with secure paywall features.

Field Quality Engineer 3, Nissan Motor Corporation, Franklin TN   Oct 2021 — Jan 2024

Oversaw model responsibility efforts by diagnosing and resolving defects, performance issues, and bugs across cross-functional teams. Delivered monthly optimization and product efficiency reports to senior leadership. Monitored and assessed monthly warranty data and quality metrics for Versa and Kicks models. Facilitated cross-functional integration meetings with engineering, manufacturing, and supplier teams to troubleshoot systemic issues. Conducted detailed product and feature quality audits on internationally manufactured components. Collaborated with global design teams to implement customer feedback.

Key Contributions:

- Reduced incident rate from 9.3% to 3.4% by coordinating with local and international design teams to address customer feedback, enhancing product quality and ensuring successful model launches.
- Investigated field incidents impacting customer satisfaction and engineered durable solutions, while enhancing vehicle quality and the end-user driving experience.
- Led investigative initiative assessing water quality at international manufacturing sites, while improving vehicle production quality through pre-emptive environmental controls.
- Controlled Nissan's JD Power Quality Customer Survey initiative, gathering comprehensive component-level performance feedback to inform engineering refinements.

- Resolved all high-priority quality and performance issues by identifying root causes and closing critical engineering process gaps.
- Earned advanced certification in high-voltage battery components to deepen technical expertise and optimize electric vehicle performance.

Field Quality Engineer 2, Nissan Motor Corporation, Franklin TN   Oct 2021 — Oct 2022

Served as a core member of the Nissan Versa Task Force, collaborating closely with manufacturing, design, and supplier teams to ensure a smooth and successful model launch. Acquired in-depth knowledge of product features and led root cause investigations into quality and performance issues. Conducted comprehensive analysis of warranty claims, parts returns, and field reports to identify both systemic and isolated issues. Supported international operations by performing on-site quality checks and providing launch-phase expertise.

Key Contributions:

- Played a key role in coordinating international pre-launch quality inspections, ensuring production readiness and adherence to performance standards.
- Drove resolution of critical quality issues through targeted root cause analysis and cross-functional troubleshooting.
- Identified and addressed macro and micro-level product inefficiencies, improving vehicle reliability and customer satisfaction.
- Optimized resource utilization and tracked performance metrics to meet the six-month task force timeline and ensure timely product launch.

Field Quality Engineer 1, Nissan Motor Corporation, Franklin TN   Oct 2018 — Oct 2021

Engaged with cross-functional teams, including manufacturing, design, and suppliers for smooth model launch. Drove efficient use of resources and monitored performance metrics to meet six-month task force completion timeline and ensure timely product launch. Provided international on-site expertise for initial quality checks during the pre-launch phase as a key member of the product launch team.

Key Contributions:

- Decreased defect incident rate from 12.7% to 2.4% by analyzing warranty claims, parts returns, and field reports to identify and resolve underlying quality and performance issues.
- Acquired deep expertise in the full spectrum of the product and features; led analysis and resolution of quality and performance issues throughout the product launch and task force lifecycle.
- Researched, investigated, and synthesized diverse performance and quality issues (e.g., warranty claims, parts returns, field reports) to identify and resolve critical product optimization needs pre- and post-launch.

EDUCATION

Bachelor Degree in Science in Mechanical Engineering
Georgia Institute of Technology
Master Degree in Business Administration
Tennessee Technological University
Advanced Software Engineering Immersive Program
Hack Reactor

TECHNICAL SKILLS

JavaScript	Python	DevOps	Docker
Git	feature branch workflow	AWS (EC2)	SQL
MySQL	NoSQL	MongoDB	Entity Relationship Diagrams
Database scaling	Mongoose	NodeJS	Express.js
MVC	Stress Testing	Scalability	HTML5/CSS3
DOM	DOM API	ReactJS	AJAX
Fetch	Component-Based Architecture	Data Structures	Algorithms
Object-oriented design	ORM/ODMs	Full-Cycle Software Development	Scalable Application Architecture
Cross-Functional Team Interaction	Platform Modernization	Migration	Agile
Iterative Project Delivery	System Performance Optimization	User Experience (UX) Enhancement	Quality Assurance
Technical Documentation	Reporting	Client-Focused Solution Design	Strategic Planning
Execution	Communication		