







Jerren Saunders

// Systems Software Developer

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/* Summary */

With over 15 years of experience in software development, I am passionate about automation, innovation, and breaking through paradigms to create streamlined solutions, improving efficiency and lowering costs. My expertise lies in developing robust applications and processes that meet and exceed client expectations. I enjoy collaborating with local, cross-site, and cross-functional teams, leveraging my communication skills to synchronize efforts and drive projects forward. My most recent accomplishment at BlackBerry was the development of a web application that reduced weekly test result triaging time from 2 days to 2 hours, enabling efficient processing of over 1 million test results each week.

/* Experience */

// BlackBerry/QNX/Research In Motion, Cary, NC February 2010 - March 2024

Senior Systems Software Developer

- Led the conception, design, development, documentation, deployment, and maintenance of the test result management web application ([BlackFish](#)).
 - Reduced management and triaging of over 1 million test results weekly from 2 days to less than 2 hours.
 - Utilized MongoDB, Node.js, Express.js, and Angular (MEAN) stack.
- Designed and prototyped the [BlackBook](#) web application (using MEAN stack) to streamline the management and sharing of hundreds of development boards.
- Built and maintained lab infrastructure for automated testing.
- Designated to take on the position of Site Lab Manager, starting May 2024.
- Played a pivotal role in preparing for annual external security audits.
- Developed JavaScript, Python, and Shell scripts to automate tasks for teams throughout the business unit.
- Launched monthly cross-site meetings for lab stakeholders to promote knowledge-sharing and teamwork.
- Mentored senior design teams in NC State's Computer Science department.
- Trained new employees including co-ops, new grads, and senior level.
- Led and presented Tech Talk sessions with local teams.
- Selected to remain in an elite team during a site-wide layoff (2014).

Software Configuration Management (SCM) Specialist | GateKeeper

- Managed Git/GitLab and Perforce project branches and conducted smoke-tests.
- Identified optimizations for config specs to reduce workspace size by 75%.
- Created server/client C# .NET applications to enable rapid development of plugins to provide features needed for testing and automating tasks.

// Ericsson Mobile Platforms, Morrisville, NC September 2005 - November 2009

Software Engineer II

- Designed and developed multiple internal applications (C#) and scripts (Perl & batch), automating testing and routine tasks.
 - Automated a frequent 12 hour process into a 2-4 hour procedure.
- Created a C# application to interface with test hardware and provide real-time plotting of current and voltage measurements from a 16-channel ADC.
- Managed dozens of servers dedicated to building code and executing tests.

Software Configuration Management (SCM) Specialist | Integrator

- Managed the delivery of new features and bug fixes ensuring seamless integration from development to customer release.

Other Accomplishments

- Titled "Site Tools Champion" for troubleshooting efforts and serving as key point of contact for tools support, process improvements, and training.

/* Skills */

// Programming Languages

JavaScript	●●●●●
TypeScript	●●●●●
Java	●●●●●
C#	●●●●●
Python/MicroPython	●●●●●
Perl	●●●●●
Batch	●●●●●
Bash	●●●●●
C/C++	●●●●●

// Database Technologies

MongoDB (NoSQL)	●●●●●
SQL	●●●●●

// Web Development

Node.js	●●●●●
Express.js	●●●●●
REST APIs	●●●●●
Angular (v8-v15)	●●●●●

// Version Control

Git	●●●●●
Perforce	●●●●●

// Cloud

Mongo Atlas	●●●●●
AWS	●●●●●

// Additional

VS Code, HTML, CSS, XML, NGINX, regex, JIRA, Linux, Windows, WSL, HyperV, MS Office

/* Education */

Computer Engineering

Bachelor of Science
North Carolina State University

Electrical Engineering

Bachelor of Science
North Carolina State University

/* Key Projects */

// BlackFish – Test Result Management Web Application

November 2017 – March 2024

BlackBerry/QNX/Research In Motion

- Led the conception, design, development, deployment, and maintenance phases of this internal tool to manage test results from diverse frameworks and teams across the organization.
 - Empowered stakeholders to store and analyze over 48.5 million tests during 2023.
 - Streamlined management and triaging of over 1 million test results weekly from 2 days to less than 2 hours.
- Spearheaded the setup and management the infrastructure including:

MongoDB replica set server configuration	Document schema and collection indexes
Node.js Service hosting JavaScript REST API	NGINX Service hosting front end
GitLab Projects & Branches	Production, Stage, and Test Servers (OS & Hardware)
Agile Software Development Lifecycle using JIRA	ES Lint (static code analysis)
- Implemented features to monitor performance metrics for identifying issues, bottlenecks, and areas needing optimization, focusing efforts on increasing system efficiency, responsiveness, and scalability.
- Collaborated with 8 teams across the organization to analyze and improve their unique testing methodologies.
 - Designed an adaptable schema to accommodate various test frameworks and ensure future scalability.
 - Developed parsing scripts in JavaScript and Python tailored to each team's specific procedures.
- Developed an extensive suite of over 1,500 test cases for the backend system using the Mocha + Chai frameworks, ensuring thorough coverage and resilience of the delivered RESTful interface.

// BlackBook – Hardware Reservation System Web Application

July 2023 – March 2024

BlackBerry/QNX/Research In Motion

- Designed and prototyped a web application to manage the sharing and utilization of hundreds of development boards among the test team and software developers.
 - Optimized resource allocation and enabled a balance of manual and automated testing.
 - Compiled feature requirements based on feedback and lessons learned from legacy methods.
 - Designed using MongoDB, Node.js, Express.js, and Angular (MEAN) stack.
- Collaborated with a team of seniors at NC State University to develop and implement an early prototype.

// ResumeTracker – Mongo Atlas

March 2024 – Current

Self

- Designed and created a Mongo Atlas App Service, the target for <https://jerren.info/<Company>> short links provided in my resume, to tally visits and then redirect viewers to a custom landing page.
- Developed to expand my experience with Mongo Atlas, build sample code for my online portfolio, and gauge interest in my resume.
- Source code and documentation may be viewed at <https://github.com/jerrens/ResumeTracker>.

// Interactive Game System

October 2021 – Current

Side Venture

- Designing and developing a Node.js service to monitor a control board via serial port, decoding proprietary binary messages, storing into a MongoDB, and providing real-time notifications to web clients.
- Leading the design and optimization efforts of the MongoDB database, including defining collections, document schema, and indexing strategies to store captured data, user information, and other system components.
- Assuming sole responsibility for the development and rigorous testing of RESTful interface.
- Providing consultation in the development of both the control board firmware and the Angular front-end dashboard.

// Remote Bug and Log Reporting Tool

October 2016 – December 2017

BlackBerry/QNX/Research In Motion

- Contributed as a member of a team tasked with uploading logs and core dump files from devices undergoing development and field testing.
- Proposed and implemented a system architecture, leveraging AWS services including S3, Lambda, SQS, and SNS.
- Configured AWS services to index uploaded items, queued them for processing, and sent notifications upon availability for analysis.
- Developed a C# application that connected to AWS services to retrieve object summaries, facilitating the review, management, and triaging of reported issues.

/* Awards */

// Extra Mile Award

- For assisting other employees and groups beyond the scope of normal job responsibility
- Three-time recipient
- Nominated by peers

// Management Award

- Recognition for extra work to establish a collaboration tool for the local site

// STAR Award

- Recognition for dependability
- Silver & Gold levels recipient
- Nominated by peers and Senior Director of Test and Development