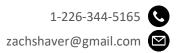


Zach Shaver



EMPLOYMENT

Full-stack Software Engineer

Riskfuel Analytics

Feb 2022 - Present

- Designed and implemented various full-stack web applications, including customer-facing demos, internal machine learning (ML) tools, and data processing pipelines, utilizing technologies such as React, Next.js, GraphQL, FastAPI, Python, Docker, Kubernetes, and various databases (PostgreSQL, CockroachDB, Redis).
- Responsible for system design, architecture, and implementation across the entire stack, including authentication/authorization, UI/UX design, database design, continuous integration/deployment, branching strategies, and test case management.
- Led and mentored a team of developers, providing guidance on full-stack development, Kubernetes, and other technologies, while also managing project management tools (JIRA) and agile processes (scrum boards, backlogs).
- Developed custom 3D interactive visualizations using Three.js for demonstrating machine learning models, neural network activations, and volatility surfaces, showcasing expertise in data visualization and interactive web experiences.
- Implemented DevOps practices, including Kubernetes cluster administration, CI/CD pipelines, monitoring (Prometheus, Grafana), logging (Loki), and automated testing (unit tests, end-to-end tests).
- Spearheaded various projects, such as a VAE demo (interactive volatility charts and surfaces with Three.js), Lever (real-time ML parameter tweaking), and Garage (data generation, processing, and training pipelines), demonstrating proficiency in machine learning and data engineering.

Software Developer T&T Power Group Mar 2020 – Feb 2022

- Conceptualized and executed a comprehensive full-stack solution (Python/Postgres/React) for remote monitoring of power generators via MODBUS TCP/IP.
- Led the development and maintenance of an internal ERP system (Python/XML/JavaScript), achieving significant milestones including the implementation of mission-critical, rigorously tested features like service scheduling, resulting in an 80% reduction in service management workload.
- Successfully migrated a legacy codebase and production database with zero data loss, multiple times.
- Managed development operations across projects, ensuring routine backups and streamlined CI/CD processes via Jenkins.

Full-stack Software Developer

Eramosa Engineering

Jan 2019 - Mar 2020

- Engineered Portlet/Servlet (JSP/jQuery) web applications for a mature enterprise SCADA reporting and data visualization/processing software, complemented by Java-based back-end REST services (Jersey JAX-RS/JAXB/Tomcat).
- Crafted and delivered two iOS/Android business applications using React-Native, including a mobile companion to the legacy SCADA reporting system and a custom work reporting app embraced by over 100 users within the inaugural month.
- Optimized build times by 87% using Gradle, alongside efficiency enhancements through algorithmic analysis and concurrent/asynchronous programming.
- Introduced agile methodologies like code review, continuous integration/deployment, and test-driven development to streamline project workflows.

Head Tracking Developer Intern

Revision Military

Jun 2018 - Aug 2018

• Independently constructed a black-box sensor fusion testing platform for validating helmet sensor fusion algorithms, comprising a Python-controlled robot arm, a native Android app, and a JavaFX desktop application.

Software Test Developer Intern

GE Digital

May 2017 – Dec 2017

- Authored, refined, and automated behavior-driven development test cases using Selenium for a network security device.
- Collaborated cross-functionally within agile frameworks to ensure punctual and thorough testing for regular product releases
- Enhanced stability of the test framework, resulting in an over 80% reduction in bugs/defects within the initial three months.
- Implemented parallelization of test suite runs, cutting total testing runtime by 50%.

Bachelor of Computer Science

University of Windsor

2018

Graduated with a 4.0 GPA

PERSONAL PROJECTS

- <u>chat.zachshaver.com</u>. An LLM-powered pre-interview chatbot built with Langchain, Python, and React.
- <u>express-openapi-zod</u>. An express router extension to auto-generate OpenAPI specifications and typescript types based on Zod schemas.
- say-what. An always-on 'rolling' audio recorder for Android, written in native Kotlin.
- zachshaver.com. My portfolio, built with React and Typescript.

UX/UI Design, & UI Mockups

- Indepocket. A collaborative task list manager for mobile, built with React-Native and Firebase.
- react-native-midi & Midio. A midi driver & a mobile application that uses it to connect midi controllers and play sounds.
- Juzahach. An Internet-of-Things system for tracking vehicles. Android trackers, a Node.js REST server and React web app.

ADDITIONAL EXPERIENCE & AWARDS

2023	Certified Kubernetes Administrator (CKA), Linux Foundation
2016 – 2018	Computer Science Teaching Assistant, University of Windsor. Assisted in teaching various computer science
	courses to students over 5 semesters. Grading, lessons, office hours, and small lectures.
2016 – 2018	Dean's List and President's Honour Roll, Faculty of Science, University of Windsor
2016 – 2017	Highest GPA in Bachelor of Computer Science Program, University of Windsor
2016	Golden Key International Honour Society

TECHNOLOGIES & SKILLS

CHINOLOGIES & SKILLS	
Languages	Typescript, Javascript, Python, Golang, Bash, HTML, CSS, & JSP. Experience with Java, Rust, Assembly, C, C# & C++.
Databases	Postgres, CockroachDB, MySQL, Realm, SQLite, & Neo4j. Experience with SQL Server and specialty/legacy databases like Kenitica & Microsoft Access
Libraries	React, React-Native, Redux, jQuery, Express, Material UI, D3, Three.js, Android, iOS, JavaFX, Qt, Next.js, Chart.js, NX, Pytest, Jest, styled-components, AsynclO, & Prisma ORM.
Tools	NodeJS, npm, Jenkins, Docker, Gradle, Swagger, Selenium, Cucumber, Gherkin, Tomcat, Git, GitHub, & Flask.
Dev Ops	Kubernetes, AWS, CI/CD, Docker Image Registries (ie Harbor, GHCR), Prometheus, Grafana, Helm, Argo Workflows, & Garden.io.
Testing	End-to-end (e2e), integration, and unit testing (Automated and Manual). Test Case Management, Test Driven Development (TDD) & Behaviour Driven Development (BDD).
Project Management	Agile Methodologies, Git Respository & Issue trackers management, Release Management, Scrum, Writing User Stories and Acceptance Criteria, Mentoring Junior Members.
Frameworks	Pulsar, Android, Odoo, Liferay, Firebase, iOS, & JavaFX. Experience with Qt.
Miscellaneous	Full-stack, DevOps, Agile, Concurrency, Algorithms, Data structures, Distributed computing, Testing (TDD/BDD), Microservices, REST, VPN, UML, Design Documents, System Design, Software Architecture,