

Tyler Battle

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Focused on building and maintaining reliable high-throughput systems

Recent Technologies

Python	FastAPI	Elixir
PostgreSQL	PostGIS	ElasticSearch
AWS	Azure	GCP
CDK	Terraform	OpenTelemetry
Kubernetes	GitHub Actions	DevContainers

Current Volunteer Positions

Saturna Island Rescue	since 2022
<ul style="list-style-type: none">• Deputy Unit Chief (Jan 2025 - present)• Licensed Emergency Medical Responder	
Saturna Island Volunteer Fire Department	since 2023
<ul style="list-style-type: none">• Firefighter• Currently completing NFPA 1001 FF I-II	

Experience

Sparkgeo

Geospatial Developer & DevOps Engineer

Feb 2020 - Sept 2024

Designed geospatial systems for a variety of customers. Focused on migrating to hybrid and cloud infrastructure.

- Built APIs in Python using FastAPI. Wrote deployments for AWS and Azure. Managed internal git repos, lint/test regimes, and CI/CD.
- Migrated customers' geospatial imagery and data collections to open formats. Updated metadata to new open standards. Fixed bugs in and proposed extensions to the standards. Implemented open source packages to interact with public geospatial data.
- Mentored junior and intermediate developers on technical, educational, and career issues.

Boundless Spatial

DevOps Engineer - Professional Services

Jan 2017 - Dec 2018

Built and operated solutions for customers using our open source stack.

- Developed websites in Django/Angular. Redesigned builds, packaging, and deployments for several projects. Database management. Managed AWS deployments. Implemented monitoring and performance testing.
- Mentored junior and intermediate developers on technical, educational, and institutional issues.

Software Engineer - Product

Nov 2014 - Dec 2016

Contributed to our open source projects and developed new internal projects.

- Built a GitHub style system for a spatial DVCS in Scala/Akka.
- Redesigned the build and packaging for several large Java projects.
- Represented open source projects in open source foundations. Shepherded projects through onboarding and license reviews of dependencies. Negotiated exemptions and rewrites with stakeholders to address licence conflicts.

WhiteOps (now HUMAN)

Senior Software Engineer

Nov 2013 - May 2014

Fraud detection in online advertising. Scaled to billions of impressions per day.

- We rebuilt a bot detection proof-of-concept into a highly scalable and robust system.
- Utilized a mix of Erlang, NodeJS, Java, MongoDB, VoltDB, and RabbitMQ on AWS.
- Prototyped a replacement for the backend business logic in Scala/Akka.
- Implemented monitoring and helped tune performance throughout our cluster.
- Architected changes to the dataflow to optimize latency, throughput, and robustness. Worked with the business on cost/benefit analyses.

Prime International Trading

Financial Software Developer

April 2011 - Nov 2012

Developed financial modelling and trading software for a small proprietary trading firm.

- Wrote models for pricing commodity options, futures, and ETFs.
- Integrated several vendor trading systems with our pricing system.
- Developed semi-automated trading systems.
- Provided technical support and guidance to our staff.
- Liaised with vendor and exchange staff to maintain our trading systems.

ShipConstructor Software Inc

Database Software Developer

Oct 2007 - March 2011

Worked in a small group designing and developing database and data access layer components for a development team of 40 programmers.

- Architected and implemented new datastorage and retrieval mechanisms.
- Maintained and debugged a database schema with 1000 tables and 16,000 stored procedures.
- Managed the internal releases of the database schema and datalayer to developers and maintained update scripts for customer databases. Developed tools to automate much of these processes.
- Provided technical support and guidance to other developers and customers.
- Developed XML schemas and import/export functionality.
- Implemented a server side path finding algorithm for routing cables through ships.
- Hand edited Subversion records to recover corrupted merge tracking information.

Queen's University

Research Software Developer

Feb 2004 - June 2006

Designed and maintained experiment control and recording systems for two neuroscience labs. Wrote data processing, analysis and visualization software. Was responsible for providing custom analysis programs and technical assistance for up to 2 researchers and 8 graduate students at a time.

- Designed and implemented novel experimental paradigms and analysis tools.
- Integrated complex data organization and analytical tool procedures/applications.
- Designed, implemented, and maintained hardware and software real-time experiment control and recording systems with sub millisecond accuracy.
- Evaluated validity and effectiveness of potential analysis techniques.
- Trained graduate students in programming and software development practices.

Research Assistant

April 2003 - Aug 2003

Provided research assistance to Computing Science professor, specializing in Computational Linguistics studies. Developed automation shell scripts, and expanded, revised, optimized existing English text-to-speech generator. Facilitated basic Unix shell and text editor use, application, and troubleshooting for French studies students, providing means of updating the French lexicon.

724 Solutions

Security Analyst

May 2001 - July 2001

Provided security analysis for this wireless banking solutions provider. Gained valuable expertise in corporate lobbying efforts, serving as liaison between Quality Assurance and Development departments. Served as Quality Assurance personnel trainer with respect to critical security issues, procedures, and processes.

- Developed company's first Quality Assurance scripts and security-oriented test descriptions.
- Successfully lobbied for security testing as part of Quality Assurance, pre-release test battery.

Junior Security Analyst

May 2000 - Aug 2000

Responsible for analysis of Palm product implementation. Conducted numerous security tests, examining encryption key storage and caching mechanism security, and black box network based attack vulnerability.

Education

Queen's University, BScH in Computing and Information Science with an emphasis in Cognitive Science

Sept 2000 – May 2005