Maria Pavlovic

mariapavlovic0@gmail.com | GitHub: mariapavlovic | LinkedIn: mariapavlovic | mariapavlovic.com

SKILLS

Languages: Java, Elixir, Go, Python, C, C++, SQL, TypeScript, JavaScript, HTML, CSS
Frameworks: Spring, Phoenix, Apache Thrift, Zookeeper, Spark, Hadoop MapReduce, React, Jest
Tools & Technologies: Git, PostgreSQL, MongoDB, RabbitMQ, Apache Kafka, MySQL, Kubernetes, Postman, Docker, IntelliJ

EDUCATION

University of Waterloo
Bachelor of Applied Science in Computer Engineering *September 2019 – April 2024*

- Relevant Courses: Distributed Computing, Real Time Operating Systems, Systems Programming and Concurrency, Data Structures and Algorithms, Computer Networks, Database Systems, Programming for Performance

EXPERIENCE

theScore
Software Engineering Intern, Platform *September – December 2023*

- Built an Elixir and Phoenix-based internal dashboard for the Release Management team to configure the monitoring of software components, centralizing the process and removing the dependency on the Platform team to make these changes
- Wrote a custom parser to convert Elixir maps to fully formatted TOML strings, with support for indentation of nested maps

Carta
Software Engineering Intern, Backend *January – April 2023*

- Contributed to a high priority project of integrating the Financial Reporting tool into the LLC product, by building out the backend of the starting page with APIs written in Java and Spring Boot, and complex jOOQ queries to the Postgres database
- Took on ownership of a top priority on-call task, writing scripts for altering customer data on the production-level database to aid a major client of the LLC team

Flybits
Software Engineering Intern, Backend *May – August 2022*

- Redesigned the internal auditing pipeline across several services in Go to remove unnecessary dependencies between services and improve the reliability of RabbitMQ messaging
- Worked on automating data migration for a high traffic service to deprecate the Postgres database in favour of MongoDB

Pitstop
Software Engineering Intern, Full-Stack *September – December 2021*

- Developed new APIs and updated React frontend to implement new features on the main user dashboard
- Stabilized functionality and refactored testing of APIs, and increased test coverage in Jest
- Created migration scripts for Postgres database to support new UI features, and Python scripts to facilitate large-scale database updates

Uptake
Software Engineering Intern, Full-Stack *January – April 2021*

- Collaborated on creating a document editor built with GrapesJS to 30,000+ users, to remove dependency on developers for document creation and editing, saving an estimated 100-250 hours of developer time per year
- Built APIs using NestJS and new frontend features with Ext JS to integrate a data analytics tool into the machinery monitoring application (EL/CMP), adding a new automated lab result interpretations view to users
- Wrote APIs and full-coverage Jest unit tests for the EL/CMP Search Page, to deprecate its use of MS SQL stored procedures

PROJECTS

Fault Tolerant Key-Value Storage - *GitHub*

- Built a fault-tolerant distributed system to store key-value pairs across primary and backup nodes, which use Apache Thrift RPCs to communicate and Apache Zookeeper for replication and detection of node failures
- Full linearizability achieved, tested with a high-volume of continuous get & put operations of key-value pairs through frequent node failures and recoveries, and port number reuse (i.e., new backups reusing port of recently stale primary)

Insulator Hydrophobicity Classifier - *GitHub*

- Developed a web and mobile application to automate classification of insulator defects (loss of hydrophobicity) with deep learning, to remove costly dependency of in-person inspections by utility engineers