Daniil **Oliynyk**

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Summary

Current Computer Science student at the University of Toronto looking to enter the software development industry. Interested in embedded systems or backend development. Fast learner, not afraid of a challenge and a team player.

Education

University of Toronto

Toronto, Canada

HBSc in Computer Science w/ double minor in Mathematics and Statistics — *Sep. 2017 - Dec. 2022*

- Relevant Courses: Data Structures and Analysis, Algorithm Design and Analysis, Databases, Into to Software Engineering, Programming on the Web, Operating Systems, Computer Security, Mobile Robotics, Scalable Computing.

Work Experience

University of Toronto

Toronto, Canada

Computer Science Teaching Assitant (CSC301 Intro To Software Engineering) — *Jan. 2022 - Apr. 2022*

- Taught and guided students through agile development methods, basic software development infrastructure, requirements elicitation, estimation and prioritization, basic UML, design patterns and refactoring
- Presented and demoed proper Github group work etiquette and industry standard tools such as **Jira**
- Conducted office hours to provide help for students with their **Java** code for assignments

Redline Telecommunications

Markham, Canada

Embedded Software Engineering Intern — *Sep. 2020 - Sep 2021*

- Directly contributed to a team working on next generation private LTE networks through my **C++** knowledge
- Streamlined hardware bring up by developing a CLI tool that would run a TCP server and recieve commands to write MAC addresses into **U-boot**, write serial numbers and hardware IDs into an **EEPROM** chip via **I2C** and generate public/private key pairs through **ssh-keygen and openssl** for product options
- Implemented a **time synchronization** mechanism to accurately maintain the Linux system time and RTC on our router boards
- Wrote application level support for **GPS, NTP and PTP** which allowed my time synchronization software to choose amongst the the three time sources in order to maintain accurate time

Projects

Scalable URL Shortner

Docker, Redis, Cassandra, Java

- A multi-threaded URL shortening **Java** program built to handle a high volume of transactions and be scalable while providing high availability and persistence through the use of **Docker, Redis** and **Cassandra**
- Implemented a simple caching mechanism to cache already shortened URLs through the use of **Redis Sentinel** placed on a **Docker Swarm**, with external storage for Redis, alongside the Java program to ensure high availability in the system
- Deployed a 3 node **Cassandra cluster** outside of the Docker Swarm, that would still be able to communicate with the Java program, to act as persistent on disk storage of shortened URLs

EXT2 Filesystem

C, Bash, Git

- Explored the implementation of the **ext2 filesystem** and implemented file system commands, mkdir, cp, rm, ln, ln -s, to operate on a ext2-formatted virtual disk concurrently
- Utilized synchronization primitives such as mutexes to ensure commands can run concurrently and eliminate the possibility of race conditions

Skills

Programming	Bash, C, C++, Java, JavaScript, PHP, Python, Rust
Front-end	React, Yew
Back-end	AWS, Cassandra, Express, JQuery, MySQL, MongoDB, Node.js, Neo4j, PSQL, Redis, Spark
DevOps	Docker, Git, Jira, Maven, Selenium