

Filip Kostic

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Technical Skills

Languages: C/C++, Java, Python, JavaScript

Technologies: Git, Docker, Make, GDB, Valgrind, Maven, JUnit, Ant, PyTest, Pip, venv, Yarn, Jira, HTML, CSS

Frameworks: JavaFX, GTK+, Flask, React

Databases: MySQL, PostgreSQL

Work Experience

Software Engineering Intern

May 2022 – Sep 2023

Intel Corporation (now Altera), Toronto, ON

- Engineered an Integrated Development Environment (IDE) using Java for embedded systems programming with Intel FPGAs, improving user interface simplicity and incorporating three advanced debugging features to streamline development processes.
- Created C++ drivers to facilitate seamless integration with FPGA hardware components, enabling the successful completion of 10 educational lab exercises and enhancing students' hands-on learning experiences.
- Compiled detailed documentation that streamlined setup processes in Quartus labs; this initiative reduced average onboarding time for new users by approximately 30 minutes, resulting in a more efficient training experience.
- Delivered a comprehensive presentation on Intel FPGA hardware capabilities during the 2023 WISE national conference, educating approximately 150 engineering students on leveraging FPGA technology for innovative solutions.
- Authored a series of seven oneAPI lab exercises that demonstrated heterogeneous computing principles, enabling smooth integration into existing courses and enhancing student engagement by providing hands-on learning opportunities.
- Guided a team of five university capstone students in developing an FPGA solution with embedded C, delivering an innovative project that exceeded performance expectations and achieved project goals.

Education

BASc. in Computer Engineering

Sep 2019 – Apr 2024

University of Toronto, Toronto, ON

GPA: 3.93/4.00 (High Honours)

Relevant Coursework: Algorithms and Data Structures, Software Engineering, Distributed Systems

Projects

Autonomous Farming Robot

Sep 2023 – Apr 2024

- Designed and built an automated hydroponic farming system monitored by a custom Android app with real-time data visualization and harvesting control.
- Created a Flask-based web server with a REST API, handling over 1,000 sensor readings daily to detect and resolve deficiencies.
- **Reduced false alerts by 15%** through robust fail-safe mechanisms. **Awarded Certificate of Distinction.**

Beaver-Buzz

Sep 2023 – Nov 2023

- Developed an event management platform for UofT students using React and Flask, enabling over 200 students to create and register for events seamlessly.
- Integrated PostgreSQL for secure storage, processing over 500 database queries during testing.
- **Achieved 5th out of 26 in the class for innovation and technical implementation.**

Gretzky-IS

Jan 2021 – Apr 2021

- Designed GIS software in C++ and GTK for interactive mapping, achieving a 15% improvement in data processing efficiency compared to initial benchmarks.
- Enhanced usability by implementing layering and zoom features, simplifying navigation for users testing the system.
- Optimized spatial algorithms to process large data sets, reducing rendering time by 20%.
- **Ranked in the top 20% of the class for exceptional technical achievement.**