

Shazil Razzaq

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SKILLS

Languages: C, C++, Java, Swift, Python, SQL, Verilog, RISC-V Assembly (Excellent debugging and OOP skills).
Web Development: JavaScript, TypeScript, HTML, CSS, React, Node.js, JSX, Bootstrap, XML.
Developer Tools: Git, Docker, XCode, VS Code, Visual Studio, Eclipse, IntelliJ, Xilinx Vivado and Modelsim.
AI-900 Certification: Experienced with Azure Machine Learning, Computer Vision, Natural Language Processing.
Strong problem solving, interpersonal, learning, analytical, adaptability, time management, and organizational skills demonstrated through various extra-curriculars, awards, and volunteering such as being a soccer coach.

EXPERIENCE

- Software Infrastructure Developer** January 2022 – April 2022
Ford Motor Company *Oakville, ON, Canada*
- Designed and implemented new features and over 20 bug fixes for networking, security, IPC, and power management platforms using C++, GNU Debugger, DDD, and Valgrind.
 - Created unit tests using the GoogleTest Suite framework (Google Testing and Mocking).
 - Explored ways to deliver efficient code by utilizing knowledge of design patterns, data structures, code optimization techniques, and using multithreading and multiprocessing.
- Android Developer** May 2021 – August 2021
OpenText *Waterloo, ON, Canada*
- Implemented over 20 UI improvements and features and resolved over 80 bugs in the OpenText Core Share app.
 - Designed clean, clear, efficient, well-tested and maintainable Java and Kotlin code using Android studio.
 - Developed features with the OpenText API to fetch data from servers and used inspector tools to debug API calls.
 - Utilized GitLab for version control, TeamCity for automated test builds and Firebase to identify and resolve bugs.
- Software Developer and Data Analyst** September 2020 – December 2020
Loblaw *Mississauga, ON, Canada*
- Designed a database to autofill fields in Excel forms from SAP by developing a Python script using the Pandas library which increased team site setup efficiency by up to 30%.
 - Presented Python tutorials on a bi-weekly basis to my fellow colleagues.
- Application Developer** February 2020 – May 2020
Enterprise eSolutions *Mississauga, ON, Canada*
- Developed an email follow-up program with C++, curl, and JDE integration to improve risk management by 20%.
 - Evaluated and analyzed existing applications, projects, promotions and RFPs.
 - Developed a custom PDF tracker with web server integration for custom ERP solutions using C++.

PROJECTS

- 5-Stage Pipelined Processor** | *RISC-V Assembly, Verilog, C* September 2022 – Present
- Building a processor using the synthesizable subset of Verilog at the RTL which implements the RISC-V ISA.
 - Creating benchmarks in C to test the processor and using Verilator to simulate the design.
- Real-Time OS** | *C* May 2022 – August 2022
- Designed a real-time executive (RTX) on an Arm Keil MCB1700 board.
 - Developed inter-task communication, memory, task, and real-time task management.
- Systolic Array Hardware** | *Verilog* May 2022 – August 2022
- Built a systolic array using Verilog which was implemented on a Xilinx PYNQ FPGA board.
- Shortest Route Finder, Music Player, and Others** | *C++* January 2021 – April 2021

EDUCATION

- University of Waterloo** Waterloo, ON
Computer Engineering (Honors) *September 2019 – Present*
- Courses:** *Systems Programming and Concurrency, Digital Hardware Systems, Real-Time Operating Systems, Algorithms and Data Structures, Computer Networks, Computer Architecture, Database Systems*