Randy Zhu

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Education

University of British Columbia GPA: 88%
BSc, Computer Science *2023 – 2028*

Technical Skills

Languages: Java, C#, Python, C, C++, JavaScript, TypeScript
Developer Tools: Git, Docker, Azure, CloudFlare, Linux, Interactive Disassembler, Cisco Wireless, Hyper-V, VMware ESXi, gdb, lldb, Valgrind Memcheck, Excel
Libraries: Sympy, Numpy, Pandas, Matplotlib, MongoDB, jQuery, Catch, Flask, Swing/Java AWT, NUnit, JUnit, Unity, Boost Graph Library, Power Apps Component Framework

Work Experience

Research Assistant (NSERC Undergraduate Student Research Award) May 2025 – August 2025
Software Practices Lab (UBC Computer Science) *Vancouver, BC*

- Under the supervision of Dr. Caroline Lemieux, I will be improving a tool to create unit tests from exploratory tests.

Power Platform Developer Co-op September 2024 – April 2025
Teck Resources Limited *Vancouver, BC*

- Developed React photo viewer plugin with Typescript and Power Apps Component Framework
- Performed automated testing of Power Apps UIs using Dataverse API and Puppeteer in C#
- Transitioned legacy Excel spreadsheets to Power App solutions using Pandas and Python, converting data and accelerating ETL pipelines for business analysis teams.
- Architected efficient relational database schemas in Microsoft Dataverse.
- Developed manual test plans in Excel, catching 85% of bugs before deployment.
- Wrote clean, event-driven functional Power FX code for UI and database interaction.

Undergraduate Teaching Assistant July 2024 – Present
The University of British Columbia *Vancouver, BC*

- Taught students about OOP concepts and software engineering best-practices.
- Debugged and optimized students' event-driven Java Swing code in office hours and labs.
- Achieved an average rating of 4.9/5 rating for student engagement, preparation, and fostering a positive learning environment.

Volunteer

Automation Developer September 2023 – Present
UBC Agroponics *Vancouver, BC*

- Orchestrated the deployment of farming automation web applications using Docker, accelerating the development lifecycle and improved scalablity.
- Visualized and stored sensor data transmitted using MQTT into Postgres, ensuring efficent data storage.
- Delivering 90% cost savings by transitioning team from paid, proprietary software to free/open-source solutions.
- Debugged Arduino C programs for interfacing with sensors, and taught fellow team members how executables are laid out in memory.

Projects

profsearch.randyzhu.com | *Flask, Python, HTML, jQuery, Docker* May 2024

- Facilitates searching of previous courses that a UBC professor have taught.
- Developed REST API for fuzzy searching professors using Flask. Using API, displayed course data by professor selection on simple website.
- Parsed & cleaned professor data using Pandas; tested & developed object-oriented model of courses.

Collidy Road | *Unity, C#, .NET* July 2023

- Lead developer for a top 10% of submissions game jam project, a role-reversal of Crossy Road
- Optimized particle FX and entity behaviour to support massive enemy count.
- Collaborated with several artists and developers over multiple days to avoid work overlap and streamline work.