Randy Zhu

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EDUCATION

University of British Columbia	GPA: 90%
BSc, Computer Science	*2023 – 2027*

TECHNICAL SKILLS

Languages: Java, C#, Python, C/C++, HTML/CSS, TypeScript, Racket/Scheme
Frameworks: JUnit, Unity, Swing, JavaFX, Android, Flask
Developer Tools: Git, Docker, Azure, CloudFlare, Linux, Interactive Disassembler, Cisco Wireless, Hyper-V, VMware ESXi, gdb/lldb, Valgrind Memcheck, C++ Sanitizers (ASAN/MSAN/TSAN)
Libraries: Sympy, Numpy, Pandas, Matplotlib, MongoDB, jQuery, Catch

VOLUNTEER

Automation Developer	Sep. 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.

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.

Decisions Bot | *Discord API, MongoDB, Python, Docker, Git* — March 2023
- Developed a Discord bot to track applicants' admissions decisions.
- Employed MongoDB to track decisions, and user calls to the bot to provide more reliable data warehousing.
- Collaborated with end users to suggest features and feedback on the bot's behaviour.

StudyBuddy | *Firebase, Flask, OpenAI API, HTML, Python* — June 2023
- Currently working on smart scheduling and studying tracking webapp.
- Leveraged OpenAI API to solve schedule constraint problems, leading to smarter, better schedules.
- Used Flask and Firebase to rapidly facilitate OAuth2 based authentication the end user.

Plantis | *Typescript, React, Firebase, HTML* — January 2023
- Plant watering tracker/reminder app for nwHacks 2023
- Architected solution to storing plant data into Cloud Firestore, a NoSQL database solution
- Implementated authentication using Firebase

WORK EXPERIENCE

Barista/Cashier	Aug. 2021 – Aug. 2022
Waves Coffee House	*Burnaby, BC*

- Efficiently handled high customer volume, maintained sanitation, and resolved technical issues in a fast-paced cafe.