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Archit Verma

Work Summary

Experienced Software Engineer with a strong background in full-stack development and a passion for creating innovative and efficient solutions. Proficient in various programming languages such as **C/C++**, **Java, Kotlin**, **Python**, **Django** and **JavaScript**, with expertise in web technologies including **ReactJS**, **NodeJS**, and **TypeScript**. Skilled in **API development**, **REST APIs**, and **OPEN APIs**, with hands-on experience in **Docker** and **Git**. Demonstrated ability to design and implement robust software architectures, optimizing performance and enhancing user experiences. Strong analytical, problem- solving, and troubleshooting skills. Excellent teamwork and communication abilities, with a track record of collaborating effectively in cross-functional teams. Committed to continuous learning and staying up-to-date with the latest industry trends and technologies.

Technical Skills

Technical Knowledge

- **C/C++/ Java/ Python/ Haskell**
- **Javascript/ ReactJs/Redux/Mediapipe/ NodeJs/Typescript/ Bash Scripts**
- **x86 Assembly**
- **XML / HTML/ CSS**
- **REST APIs/ OPEN APIs**
- **Docker / Nginx / Junit 5 testing**

Software

- **Windows, Linux, Mac OS**
- **Android Studio, Visual Studio**
- **Git/ Postman**
- **Microsoft suite app/ G suite apps**
- **Figma / Canva**

Work Experience

Software Engineer (Rapidia Tech Inc.)

- **Part Time** JAN 2023 – MAY 2023
  - Transitioned the back-end API architecture of Rapidia Host V3 from **REST APIs** to **OPEN APIs and Swagger**, ensuring a more efficient and standardized approach.
  - Added new profiles to **Rapidia Slicer** that is integrated with **Cura** using **C/C++**.
  - Developed a **Python-based AI model** that detects metal paste objects, adjusts their flowrate, and analyzes print quality (Good or Bad) in real-time. This aims to reduce paste wastage, enhance print quality, and improve customer experience during the printing process.
- **Co-op** JAN 2022 – DEC 2022
  - I worked on the new iteration of **Rapidia Host**, where I transitioned the existing software from an Electron framework to a **Microservice architecture**, enhancing performance and

efficiency. This redesign involved implementing **Docker**, **Nginx**, and a **REST APIs** structure. I also integrated features like **Gcode** file processing and 3D modeling with **ThreeJS**. My role included developing various services such as internet connectivity, logging, installation, update service, and additional printer functionalities, ensuring a comprehensive and robust control system for the metal 3D printer software.

- Implemented the back-end using **Bash Scripts, Express, TypeScript, NodeJS, Docker, and Nginx.**
- Implemented the front-end using **ReactJS/Typescript**, **NodeJS and MUI (Material-UI)**.
- Collaborated with cross functional teams as a Full-Stack Software Engineer to design, develop, and gather the specific requirements to implement and maintain the software. Conducted code reviews and tested the quality.
- **Under Supervision of Thomas Lai (Software Team Lead)**

Academic Projects

AI projects

- PACMAN Game JAN 2023 - APR 2023
  - Used **Python** to **automate**, **optimize**, and **enhance** PACMAN's movements in the game. Implemented various AI algorithms and heuristics learned during the **Introduction to Artificial Intelligence** course at SFU to achieve the highest game scores.

Android Projects

- Sign Language Learning App (Fluent Hands) NOV 2023 - DEC 2023
  - I developed an Android app in **Kotlin**, utilizing the **Mediapipe** framework and XML, to assist users in learning alphabets and forming words in American Sign Language (ASL). In our five-member team, my role included creating the learning and result pages and integrating **Mediapipe** for ASL gesture recognition. The app's GitHub repository can be viewed at: [group-18 on GitHub](https://github.com/Architv27/group-18).
  - Website Link: CMPT362 Project (google.com)
- Restaurant Inspector NOV 2020 - DEC 2020
  - Created a Restaurant Review App using **Java**, **Postman**, and **XML** for the course Intro to Software Engineering. The app provides restaurant violations and hazards ratings in Surrey. It includes advanced search, filters, favorites, multilingual support, and Google Maps integration.

Education

Simon Fraser University JAN 2019 - PRESENT

- Bachelors of Applied Science in Computing Science.
- Expected Graduation: Sept 2024

Volunteering Experience

Student Ambassador, Simon Fraser University OCT 2021 - PRESENT

- As a student Ambassador, I am responsible for event management and assistance. Helpstudents to engage in the event.

Mentor, ReMBC (Rural eMentoring BC) AUG 2021 – SEPT 2022

- As a mentor, I am responsible for mentoring and guiding high school students to resolve their queries and help them achieve their academic and life goals.