Saad Rahman Warsi

C/C++, Java, Python, Kafka, SCDF, Docker, Kubernetes, OpenShift, GCP
MS (AZ-900) Certified, PSM-I Certified
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Security Status: Reliability

EDUCATION

Bachelor of Applied Science, Software Engineering (CO-OP)   September 2021 – present
University of Ottawa (Ottawa, ON)   **CGPA: 9.52/10**

- Expected graduation date: December 2025
- Scored 10/10 CGPA in Fall 2021 and Winter 2022 terms
- Achieved **Dean's Honour List** recognition for every academic term in uOttawa
- Awarded the **University Merit Scholarship** for every academic term in uOttawa
- Received the **University India Engineering Entrance scholarship** in 2021-22 and 2022-23 in uOttawa

RELEVANT WORK EXPERIENCE

Student- FSWEP   Sep 2024- Present (Part Time)
Student- Co-op   May 2024- Aug 2024 (Full Time)
Agriculture and Agri-Food Canada (AAFC)

- Containerized bioinformatics software Practical Haplotype Graph (PHG) version 2 using Singularity, enabling consistent and portable deployments in cloud environments.
- Implemented bioinformatics data processing pipelines, integrating tools like PHG using Slurm.
- Executed large-scale data computations on High-Performance Computing (HPC) clusters in processing complex bioinformatics workloads, and engineered data migration solutions between HPC clusters (BioCluster to GPSC)
- Developed a database prototype using SQLite and TileDB for genomic applications.
- Created docker image of PHG v2
- Established PHG v1 and v2 on BioCluster & GPSC.
- Established tools like GATK, VCFtools and PLINK using Singularity
- Transferred huge data from one cluster to another

IT Programmer/Analyst   Sep 2023- Dec 2023
Canada Revenue Agency (CRA)

- Developed skills in DevOps, Angular, MicroServices, Containers, Docker & Kubernetes, OpenShift, Scrum and Microsoft Azure.
- Gained experience in Agile methodologies using tools such as JIRA. Acted as Scrum Master for a sprint. Also enhanced the Docker training curriculum.
- Designed & developed a web application *OCBusTracker* using the Microservices architecture with an angular front end. Then containerized it within Docker and also deployed it on Openshift. Project Link: *OCBusTracker*
- Developed a web project *DevHub* using Angular, NodeJS and PostgreSQL to be used as an internal collaborative platform amongst peers.

Software Developer Intern   Jan 2023- April 2023
CNW Group Ltd. - Cision, Ottawa, Ontario

- Worked in Content Ingestion on a project which was responsible for data ingestion, enrichment, and delivery of data to the output pipeline for data analysis or operations
- Maintenance of Cloud -based data streaming and it's migration to the Google Cloud Platform (GCP)
- Performed troubleshooting of build issues and resolved them, fixed errors, tested a few components, and did some customizations for GCP

APPLIED PROJECTS

Web Projects
- Designed some web user interfaces using HTML, CSS, JavaScript, Bootstrap & React viz. (i) "*CareerJump*" offering mock interviews, group discussions, aptitude tests and personality development sessions (ii) "*SciPlanet*" offering scientific laboratories to the public (iii) Card Game using Web APIs
Testing Projects
- Throughout the Quality Assurance course, was actively engaged in numerous assignments, proficiently utilizing a range of cutting-edge testing tools including Selenium, JMH, IntelliJ Code Coverage, EasyMock, and PitTest

- As a team of four members, worked on an extensive testing project to test the web application "Online Book Store," encompassing test case design, coverage analysis, performance testing, mutation testing, etc.

App Development
- Developed a city-based food sharing application called "Mealer" for Android using Java, Firebase & Git where local cooks can sell meals to clients from their homes. This was a six member group project
- Developed Android Apps for Calculator and another which maintains multiple timers used as a cooking timer.

RELEVANT SKILLS

Engineering

- Acquired proficiency in software development industry standards, tools, and practices, including coding style, GitHub actions, and agile methodology
- Demonstrated proficiency in the use of cutting-edge cloud application development technologies, including Kafka, SCDF, Kubernetes, and GCP to carry out the assigned project work
- Executed tests and analyzed results for cloud application development and testing, which included resolving build issues and defects, testing streams, formulating Grafana queries, and adapting to GCP
- Developed projects/Apps using the following technologies: C/C++, Java, Python, Android, Firebase, Git
- Developed web projects using HTML, CSS, JavaScript, Bootstrap, React, Angular, PostgreSQL, NodeJS

Technical

- Programming languages: C/C++, Java, Python
- Web development: Angular, React, NodeJS, HTML, CSS, JavaScript & Bootstrap
- Testing: Selenium, JMH, IntelliJ Code Coverage, EasyMock & PitTest
- Cloud Technologies: Docker, Kafka, SCDF, Kubernetes, GCP, OpenShift, MS Azure, AWS
- DevOps: Git/Gitea/GitHub, Jenkins, SonarQube, Maven & Jira.
- Other Tools & Technologies: PostgreSQL, Firebase, Android
- Operating systems: DOS, UNIX/Linux, Apple, Windows systems

Communication

- Participated actively in Group Project meetings and Classroom discussions
- Wrote multiple technical and laboratory reports and reviewed formal engineering documents
- Demonstrated adaptability by effectively collaborating in both team and individual settings, leveraging the Agile methodology to enhance communication and collaboration in project development

OTHER TECHNICAL EXPERIENCE

- Participated in uOttaHack-5 hackathon (Feb 10-12, 2023) and presented the project *Earthquake Disaster Management* using the Solace cloud to help the earthquake victims
- Designed and simulated several combinational and sequential circuits using Intel Quartus software
- Learned basics of Arduino by making following Arduino UNO based models: Blinking LED and LED Flowing Lights

VOLUNTEER EXPERIENCE

Learning for Charity, Ottawa, ON
- Held Final exam prep session for MAT1320

EXTRA-CURRICULAR ACTIVITIES

- Member of uOttawa Software Engineering Students Association and currently holding the post of VP Academics
- Content Creation: Educational & Travel content creation on YouTube