Saad Shahbaz

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EDUCATION

McGill University — **Montreal, QC**
Bachelor of Arts: Major: Computer Science, Minor: Management
- **CGPA: 3.79 – Distinction,** Tomlinson Award, Dean's Honour List (2020-2021)

TECHNICAL SKILLS

Languages: Python, Java, C#, C, JavaScript, PHP, Bash, SQL, Assembly, VBA, R, CSS, HTML
Technologies: Git, Linux, Solace, Unix, Docker, Power BI, Jira, MySQL, Pandas, NumPy, PyTorch, TensorFlow, Jenkins, TeamCity, uDeploy
Cloud Computing: Amazon Web Services (AWS), Microsoft Azure, Oracle, CouchBase

WORK EXPERIENCE

Software Developer — **Mississauga, ON**
Citi Bank — *March 2023 – Present*
- Developed a highly efficient simulator in **Java** using **Ambrosia** (*Microservices Architecture*) that accurately replicates order processes, aiding in comprehensive testing and significantly reducing production errors by more than 50%.
- Introduced a gateway implementing the **Solace** publisher and subscriber for QA to seamlessly transmit orders and receive prompt responses, significantly enhancing the overall testing process.
- Constructed **uDeploy** scripts and **TeamCity** builds to deploy the Simulator on the development server seamlessly.
- Created a separate pod for the simulator by setting up configurations in **Couchbase**, and developing start, stop and clean scripts in **Python** to deploy the simulator to Podmaster tracking chronicle queues status and monitoring the smooth flow of orders between the services.
- Engineered automation scripts in **Bash** that dynamically generated release branches for a suite of 32 services, streamlining the branching process and promoting parallel development.
- Authored 500+ unit tests to increase test coverage to 92% for 3 different services.
- Demonstrated expertise in providing L3 support on a rotating basis, effectively troubleshooting and resolving critical issues to ensure the smooth functioning of the software ecosystem.
- **Technology Stack:** Java, Bash, Python, SQL, TeamCity, uDeploy, BitBucker, Jira, Solace, AutoSys

Data Science Intern — **Montreal, QC**
Air Liquide — *May 2021 – December 2022*
- Led the S&OP (Sales and Operations) project, utilizing **Python** and machine learning models (such as **ARIMA** and **Facebook Prophet**) to accurately predict sales, volume, and quantity for the next 18 months with an accuracy rate of 95%.
- Conducted extensive data cleaning for 10+ projects using **Python** and **Excel**, including S&OP, CPQ, email classifications, and churn, to ensure high-quality and accurate results from machine learning models.
- Customized 20+ **MS Power BI** dashboards, visualizations, and interfaces to deliver meaningful and actionable insights on the S&OP, Email Classifications, and several other projects.
- **Technology Stack:** Python, SQL, Power BI, Jira, Git, Pandas, NumPy, MS Excel, VBA

Software Engineer Intern — **Mississauga, ON**
Citi Bank — *May 2022 – August 2022*
- Migrated from ADM to ATOM (deployment tool) to deploy add-ons and Composer (an in-house research tool) to employees' machines, saving a tremendous amount of resources for Citi by removing data central dependency.
- Developed a **CI/CD** pipeline on **TeamCity**, integrating it with **uDeploy** that pushes artifacts automatically to ATOM, thus allowing around 2500 users to switch between environments and streams seamlessly.
- Programmed an executable using **C#** that deploys the files pushed by ATOM directly to the machines' registries and folders, creating shortcuts for Composer, reducing deployment and update times by 60% and increasing version stability by 45% for first-time installations.
- **Technology Stack:** C#, TeamCity, Python, Docker, Bitbucket, Jira, React, XML, Snowflake

PROJECTS

TA Management Website
- Led a team to develop a dynamic and interactive TA Management website using **HTML**, **PHP**, and **JavaScript** for the McGill School of Computer Science competition, winning first place.
- Used **SQLite3** to build a relational database for storing and retrieving data for an application, enabling the website to be hosted on McGill's servers.
- Implemented proper authentication for user access and customized pages based on user privileges.

Covid Vaccination Database Application
- Created an interactive app for the COVID-19 vaccination campaign. Facilitated data management using JDBC and IBM DB2. Implemented using **Java** and **SQL**. Created a relational database model for the same.