Faisal Hossain

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Education

University of Calgary May 2024
Bachelor of Science in Software Engineering *Calgary, AB*

Experience

Software Engineer Intern Jan 2023 – Aug 2023
Garmin Ltd. *Cochrane, AB*

- Designed an error handling mechanism during file transfers across low powered devices through the Bluetooth Low Energy protocol stack to improve file transfer reliability using C and C++.
- Architected and built an automation testing framework, on top of Appium Framework, enabling creation of intuitive automation workflows for running end to end testing across diverse device configurations in Python.
- Improved reliability of testing automation modules that resulted in 20% overall usage of the modules by fixing existing issues, implementing new features and introducing reproducible environments using Python.

Software Engineer Intern May 2022 – Dec 2022
Garmin Ltd. *Cochrane, AB*

- Implemented a responsive dynamic web page and its corresponding JSON REST APIs, which displays results of processed data files to preview data analytics on preview formats, such as graphs, tables and calendars using HTML, CSS, ES6 JavaScript, Bootstrap and Flask to achieve an increase of 50% page visits from product teams, and saved over 10 hours of manual work daily.
- Introduced and developed an Continuous Deployment (CD) pipeline for an internal web dashboard, which utilizes Linux, Docker and Jenkins, delivering new features to clients with very little manual errors. Reduced downtime of the website by 30% for improved operations.
- Improved an existing Continuous Integration (CI) pipeline for the Biometrics product team using Jenkins and Python scripting by incorporating parallelism and transitioning to high-performance compute units, expedited pipeline execution times by 40%, significantly boosting productivity.

Software Developer Intern Jan 2022 – Apr 2022
Banff Trail Education (Startup) *Calgary, AB*

- Developed interactive Figma pages for an web application that allows K-12 teachers to create tailored lesson plans for their students, which resulted in positive feedback from potential stakeholders
- Created robust prototypes for an web application targeting international students preparing for their exams using Bootstrap and Node.js

Undergraduate Research Assistant May 2021 – Aug 2021
University of Calgary *Calgary, AB*

- Built an open-source library in a team of 4 to integrate programming support for Python, Octave, Maxima and R to VEE Pro to maximize support for mathematical operations by utilizing TCP sockets, which increased the functionality by 20%
- Took an leadership role to set weekly attainable team goals to ensure the project was delivered on time
- Refactored the codebase into an object-oriented architecture to improve code maintainability by 30%

Projects

Wrist-Based Smartwatch Gestures | *Tensorflow, ConnectIQ, Koltin, Java, Maven* Aug 2023 – Present

- Create an ConnectIQ application to integrate continuous gesture recognition on a Garmin Smartwatch for users to execute custom commands on an Android Device in a team of 4.
- Machine learning will be used to create the gesture model and be able to detect a gesture from the user's movements
- Sponsored by Garmin

Technical Skills

Programming Languages: Python, HTML, CSS, JavaScript, Node.js, C, C++, C#, Java, Groovy, SQL
Frameworks: Express, Flask, Bootstrap, GoogleTest, Appium, Robot Framework
Developer Tools: Version Control (Git), Github, Linux, Docker, Eclipse, Jenkins, Jira, Confluence, DevOps
Relevant Courses: Data Structures and Algorithms, Human Computer Interaction, Database Management Systems