M. A. Fiaz

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GitHub | LinkedIn | Portfolio Website

EDUCATION

University of Alberta 4th Year, Class of 2024
Software Engineering, BSc (Co-op Program)

TECHNICAL SKILLS

Programming Languages: Java, Javascript, Typescript, Kotlin, Python, C++, C, TCL
Tools/Frameworks: Spring Boot, Node.js, React, jQuery, GitLab, Docker, HTML, CSS, JUnit, Flask, Linux, Bash, Android
Databases: PostgreSQL, MongoDB, MySQL, SQLite
Miscellaneous: Data Structures & Algorithms, OOP, Agile, Requirements Engineering

WORK EXPERIENCE

Nokia, *Software Developer Co-op* April – December 2022

- Developing front and back-end features for Verizon Wireless Service Portal, the primary internal network asset management system used by Verizon Wireless for managing/configuring over 30,000 company network assets
- Led development of scalable, highly performant microservices for Report Generation and Unpacking using Java and Spring Boot, reducing report viewing times by over 15x compared to legacy system
- Constructed data acquisition API for network element configuration failures using Java, featuring complex data queries using MySQL and JDBC, which automated manual support engineer data acquisition task to under 5 seconds
- Developed intuitive, modular pages/components using Javascript, Polymer.js, jQuery, and Bootstrap
- Impacted code review time by using Gitlab and Docker in implementing multi-stage pipeline across 20+ projects
- Operated using Agile delivery principles and iterative software development lifecycles in team of over 10 developers

Nokia, *Automation Developer Co-op* January – April 2022

- Wrote testbed configuration scripts for new router platform currently in use by over 100 test engineers
- Automated tests using TCL, reducing associated manual traffic test workflow time for router chips by over 10x
- Debugged and identified root cause of complex bugs, heightening stability of fundamental software features
- Designed and implemented unit tests of new software features in a Linux-based regression environment

Neurocage Systems Ltd, *Software Developer Co-op* May – September 2021

- Built, deployed, and optimized computer vision systems for rodent cage state estimation (food levels, water levels, etc)
- Re-designed state estimation system, reducing total footprint of ML models from 13GB to 3GB
- Developed system for low-light optimization and bad video frame detection with accuracy of over 90%, using Scikit-Learn
- Implemented texture analysis and image processing pipelines using OpenCV, Numpy and Scikit-Image

PROJECTS [Portfolio Website]

Data Collection App and REST API for Automated Mood Tracking Study [Github Repo]

- Developed Kotlin-based Android app and conducting study with team of ~20 volunteers to determine effectiveness of mood inference using smartphone usage data
- Constructed robust, complex data collection system for acquiring volunteer phone usage data
- Built secure REST API for data storage with PKCE Authorization Code Flow using Auth0, Typescript, and Node.js
- Created custom deployment and update system for new app releases without Google Play Services

UAlberta Clubs Credit Tracking Web App: Creddi [Website][Github Repo]

- Led team of 4 developers in building centralized credit tracking system for food sales, saving UAlberta clubs estimated $100-$200 in transaction fees annually
- Assembled web API and email queuing system with Typescript, Node.js, integrating Twilio Sendgrid API for email invoices

Epilepsafe [Devpost][Github Repo]

- Created tool for Epilepsy patients able to screen YouTube videos for potentially seizure-inducing content using Python and OpenCV
- Awarded Winning Project at Hacked Beta 2020

LEADERSHIP EXPERIENCE

Computer Engineering Club, *Co-President | Former VP Internal* [Website][Github Org] September 2020 – Present

- Restructured club from student advocacy to service/event-based model, increasing revenue by 300% over last year
- Managing development of UAlberta's first tech-focused career fair, Career++, with over 10 companies purchasing booths
- Led club through financial crisis involving 30% funding reduction, loss of bank account, while retaining club services

Albertaloop, *Software Team Lead* [Website][Github Repo] May 2021 – February 2022

- Led team of 6 developers in writing software for train on-board computer systems using Agile methodologies
- Developed autonomous train control system and API for communication with industrial motor controller using C++

ACHIEVEMENTS

Schulich Leader Scholarship in STEM 2022
William S Ziegler Leadership Award 2021
1st Place – Junior Design, Western Engineering Competition 2021 [Link]