Muhammad Fiaz

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GitHub | LinkedIn | Portfolio Website

EDUCATION

University of Alberta 3rd Year, Class of 2024
Software Engineering, BSc (Co-op Program) *Cumulative GPA: 3.4 / 4.0*

WORK EXPERIENCE

Automation Developer January – April 2022
Nokia

- Creating scripts for test/task automation using Bash and TCL
- Performing unit testing of new software features in a Linux-based regression environment
- Build test networks, and use test equipment for traffic generation and protocol emulation
- Work closely with testers and developers to investigate and resolve bugs
- Test traffic encryption and authentication at IP and/or MAC level

Software Developer May – September 2021
Neurocage Systems Ltd.

- Created artificial intelligence systems for animal husbandry in rodent homecages
- Built, deployed, and optimized both classic and ML algorithms to estimate homecage state (food levels, water levels, cage dirtiness, etc) primarily with Scikit-learn and Keras
- Experienced developing image processing pipelines using OpenCV, Numpy and Scikit-image
- Curated datasets and developed complex queries with MySQL
- Exposed to back-end website development with Flask

PROJECTS (Portfolio Website)

Student-Developed Train (Website)

- Managing team of six in developing software system for next-gen train system (Hyperloop) as Software Team Lead
- Leading autonomous motor control system development using C++ and Teensy 3.6 microcontrollers
- Developed several APIs based on CAN Protocols allowing for quick vehicle network communication

UAlberta Clubs Credit Tracking Website: Creddi (Github Repo)

- Lead team of 4 developers in developing consumer credit tracking system for UAlberta Clubs' food sales
- Built website front-end using React, HTML, CSS, and JavaScript
- Developed REST API for website back-end with TypeScript, Node.js, and the Express framework
- Integrated database for storing transaction data using PostgreSQL

Autonomous Human Tracking Fan and Desktop App (Github Repo)

- Developed fan capable of tracking users using camera feed, as well as associated desktop app
- Built desktop app for manual control with HTML, CSS, and JavaScript front-end, and Flask back-end
- Integrated Human Tracking Capabilities using neural networks powered by Tensorflow

Airblip (Github Repo)

- Created solution allowing for data transfer over sound as hackathon project
- Developed Android app capable of encoding bytes into sound using Java
- Implemented desktop app for sound reception and decoding using Flask

TECHNICAL SKILLS

Programming Languages: Python, TCL, C, C++, Java, JavaScript, TypeScript
Tools/Frameworks: Tensorflow, Keras, Git, HTML, CSS, Flask, React, Express, Node.js, OpenCV, SQL, MySQL, SQLite, PostgreSQL, MongoDB, Docker, RTOS, Linux, Bash, Android Studio
Miscellaneous: REST APIs, Microsoft Office

VOLUNTEER EXPERIENCE

Albertaloop, *Software Team Lead* May 2021 – Present
Helped organize large fundraising events, ran weekly technical/leadership meetings, and managed developer team

Computer Engineering Club, *Vice President Internal* September 2020 – Present
Handled several professional development programs, arranged VP meets, and organized merchandise sales

Interdepartmental Science Student Society, *Web Development Volunteer* 2020
Member of programming committee, developed event website, helped manage leaderboards and website during event

ACHIEVEMENTS

1st Place – Junior Design, Western Engineering Competition 2021
Winning Project - HackEd Beta 2020
1st Place - Junior Design, University of Alberta Engineering Competition (UAEC), 2020