Muhammad Fiaz

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GitHub | LinkedIn

EDUCATION

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

TECHNICAL SKILLS

Programming Languages: Python, TCL, C, C++, Java, Javascript, Typescript, MATLAB
Tools/Frameworks: Tensorflow, Keras, Git, HTML, Flask, React, Express, Node.js, OpenCV, SQL, MySQL, SQLite, MongoDB, RTOS, Azure, Linux, Bash
Miscellaneous: Microsoft Office, CAN Protocols, Photoshop

WORK EXPERIENCE

Incoming Automation Developer   January – April 2022
Nokia
- Performing unit testing of new software features in a Linux-based regression environment
- Build software with TCL and Python for automation purposes
- 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
- Experience building, deploying, and optimizing classic, ML algorithms to estimate homecage state (food levels, water levels, etc) primarily with Scikit-learn and Keras
- Experience 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

Human Tracking Fan
- Developed fan capable of tracking users using camera feed, as well as associated web app
- Built web app for manual control using Flask, HTML, CSS, JavaScript, and the Fetch API
- Integrated Human Tracking Capabilities using neural networks powered by Tensorflow
- Designed interfacing system between web app and Arduino through Serial Communications

EpilepSafe
- Developed seizure prevention tool for Epilepsy patients using Python and OpenCV in group of two
- Scans YouTube videos for content with potential of triggering seizures
- Won Winning Project Award at HackEd Beta 2020

Albertaloop
- Developing embedded software for train system using ChibiOS (RTOS) and C++
- Managing group of six in designing and implementing train control systems, including development of motor control and battery management systems

VOLUNTEER EXPERIENCE

Albertaloop, *Software Team Co-Lead*   May 2021 - Present
Computer Engineering Club, *Vice President Internal*   September 2020 - Present
Interdepartmental Science Student Society, *Web Development Volunteer*   2020
The Grief Directory, *Support Line Volunteer*   2019

ADDITIONAL INFO

Achievements:
- 1st Place – Junior Design, Western Engineering Competition 2021
- 3rd Place - Junior Design, University of Alberta Engineering Competition (UAEC), 2019
- Newbert Construction and Engineering Ltd Entrance Award in Engineering, 2019
- The Faculty of Engineering Gold Standard Scholarship, 2019

Languages: English (Fluent), Urdu (Fluent), French (Beginner)