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*

TECHNICAL SKILLS

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

WORK EXPERIENCE

Incoming Automation Developer January – April 2022
Nokia

Software Developer May – September 2021
Neurocage Systems Ltd.

- Created artificial intelligence systems for animal husbandry in rodent homecages
- Experience building, deploying, and optimizing both classic and 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 (click here to view Portfolio Website)

Student-Developed Train (Albertaloop Website: Link)

- 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
- Implemented vehicle communication network based on CAN Protocols

Credit Tracking Website

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

Autonomous Human Tracking Fan and Web App

- 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 (Youtube Video: Link)

- Developed seizure prevention tool for Epilepsy patients using Python and OpenCV
- Scans YouTube videos for content with potential of triggering seizures
- Awarded Winning Project at HackEd Beta 2020

VOLUNTEER EXPERIENCE

Albertaloop, *Software Team 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: Link
- Winning Project - HackEd Beta 2020
- 3rd Place - Junior Design, University of Alberta Engineering Competition (UAEC), 2019
- The Faculty of Engineering Gold Standard Scholarship, 2019

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