

Muhammad Fiaz

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[GitHub](#) | [LinkedIn](#) | [Portfolio Website](#)

EDUCATION

University of Alberta

Software Engineering, BSc (Co-op Program)

3rd Year, Class of 2024

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

Automation Developer

January – April 2022

Nokia

- Creating scripts for test automation using Bash
- 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
- 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

UAlberta Clubs Credit Tracking Website: [Credd.io](#)

- 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 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

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)