# Muhammad Umer Fiaz

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## EDUCATION

**University of Alberta**                                                            Expected Graduation May 2026
*Software Engineering, BSc Co-op Program*                                            **Edmonton, AB, Canada**

## EXPERIENCE

**Software Engineer Intern**                                                         Incoming May 2024
*Dayforce (formerly Ceridian)*                                                       *Toronto, ON*

**Software Developer Intern**                                                        January 2024 – Present
*SUBNET Solutions*                                                                   *Calgary, AB*
- Devising **Python** AI microservice for querying data on 4 million sensory devices, using **Langchain** and **Django**.
- Creating **Typescript**-based **React** interface for **Django** and **.NET** REST API pipeline hosted on **Azure** VM.
- Reduced API calls in **TypeScript** UI by over 80% via batching through new **TypeScript Node endpoints**.

**Fullstack Developer**                                                              May 2023 – August 2023
*University of Alberta*                                                              *Edmonton, AB*
- Developed a payments page containing different pricing plans using **TypeScript**, **React**, **Next.js**, and **Figma**.
- Reduced errors users faced by 41.8% by enhancing UI designs, and improving and creating UX designs in **Figma**.
- Created application implementing the API 1183 practice for assessing pipelines utilizing a **Docker**-containerized **Flask** REST API **Python** workflow that uses **Pandas**, **NumPy**, and **Seaborn** for data visualization.

**Software Developer Intern**                                                        May 2023 – August 2023
*PainWorth*                                                                          *Edmonton, AB*
- Automated legal keyword extraction using **Python** and **Flask** in **Docker**, optimizing process from 2 hrs to 10 s.
- Devised **Langchain** and LLM classification pipeline with **.NET** preprocessing connected to **MySQL** database, improving legal info extraction accuracy by 9.8% over 9000+ documents and cutting cost per document by 99.8%.
- Migrated entirety of the organization's infrastructure from **Azure** to **GCP**, reducing running costs by ∼88.7%.
- Integrated CI/CD pipelines with **Terraform**-provisioned **Kubernetes** clusters to keep infrastructure up to date.

## PROJECTS

**Gradient** | *JavaScript, Python, React, WebSocket, Tesseract, Tornado, Firebase, Pytest*                January 2024
- Led team of 5 in creating studying dashboard web app that gamifies studying and greatly improves study notes.
- Designed Mixtral-8x7B LLM and **Tesseract** OCR **Python** script to make notes more concise and structured.
- Created **Python** server that connects backend and **Firebase** database with **React** client via **websockets**.

**Fire Alert!** | *React Native, Flask, Scikit-Learn, Twilio, JavaScript, Python*                October 2023
- Led hackathon team of 4 in creating a **React Native** app that alerts a user when fires are near a location.
- Implemented **Flask** API that collects over 81,000 spatial data points from NASA FIRMS API on position of fires and groups them together according to proximity using **Scikit-Learn**.

**ThriftAid** | *React, Express.js, Node.js, Redux, MongoDB, TypeScript, JavaScript, AWS*   May 2023 – August 2023
- Created **TypeScript**-based web app that allows thrift stores to donate excess stock to homeless shelters.
- Built secure REST API for user data storage using **Express.js**, **Node.js**, **MongoDB**, **React**, and **Redux**.
- Implemented JWT authentication using **Redux**, and protected API keys by using them as secrets in **AWS**.

## LEADERSHIP

**VP External**                                                                      May 2023 – Present
*University of Alberta Computer Engineering Club*
- Launched initiatives such as university's first technical career fair, 5 workshops, a hackathon, and 2 conferences.
- Developing partnerships with tech-industry and other universities to hold events for over 2500 students.

## TECHNICAL SKILLS

**Languages**: Python, JavaScript, TypeScript, Java, C++, MATLAB, C#, SQL, HTML, CSS
**Libraries/Frameworks**: React, Next.js, Flask, Selenium, Express, Pandas, Node.js, .NET, JUnit, React Native, Django
**Developer Tools**: Terraform, Kubernetes, AWS, Azure, GCP, Visual Studio, Git, Docker, Linux, MongoDB, MySQL
**Miscellaneous**: REST, JIRA, Data Structures & Algorithms, Relational Databases, Infrastructure as Code, Agile