ZAID AHMED

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EDUCATION

Bachelor of Science, Software Engineering + Bachelor of Commerce, Business
Expected Graduation: May 2026
University of Calgary

SKILLS

- **Languages:** Python, C, C++, C#, Java, SQL, HTML, JavaScript
- **Frameworks/Libraries:** Keras, TensorFlow, Pandas, Polars, Fusion360, Unity, MRTK, Node.js, React.js, Three.js, Tailwind, Bootstrap, Dagster
- **Other Technologies:** CSS, JSON, YAML, Excel, Adobe Suite, Fusion 360, Blender

WORK EXPERIENCE

Software Engineer Co-op - Development and Production Data Solutions

Cenovus Energy

January 2024 – December 2024

- Collaborated with Canadian Oil Sands and Thermal Heavy Oil Operations Development and Production teams to understand their data needs and challenges.
- Designed and developed end-to-end data and analytics solutions tailored to the requirements of different teams.
- Implemented full-stack development solutions, including full-stack frameworks such as Ruby on Rails.
- Performed data engineering tasks such as data ingestion, transformation, and storage optimization.
- Orchestrated data pipelines for efficient and reliable data processing using tools such as Dagster.
- Conducted analysis and reporting on large datasets to derive actionable insights.
- Applied machine learning and statistical inference techniques to solve complex business problems.
- Documented processes, workflows, and technical implementations to ensure knowledge sharing and maintain accurate records.
- Participated in training sessions and workshops to enable teams in adopting and effectively utilizing data solutions.

Software Deployment Intern

Vertical City

July 2023 – August 2023

- Deployed and maintained Ubuntu 20 on elevator/lobby screens, ensuring optimal functionality and performance.
- Executed comprehensive documentation processes, fostering organized record-keeping for future reference and audits.
- Worked closely with the Lead of Property Support to establish and maintain robust communication channels, facilitating seamless updates on elevator screens.
- Proactively addressed any technical issues, employing a problem-solving approach to minimize downtime and ensure uninterrupted elevator screen operations.

PROJECTS

BraVRy

- Developed a virtual reality exposure therapy simulation to help the millions of Canadians suffering from anxiety-related illnesses.
- Uses cutting-edge VR technology, comprehensive biotracking and evidence-based exposure therapy protocols.
- Developed using the Meta Quest 2 and Unity Editor for natHacks 2023, Canada's largest neurotech hackathon.
- Recieved 2nd place along with seed funding and in-kind support for the project.
- LinkedIn Post

- Pitched for Ontario Brain Institute's Neurotech Competition at Inventures 2024, a conference with over 4000 attendees.
- Secured 10,000 in funding from the Helios and Cumming School of Medicine Research Innovation Award.
- [LinkedIn Post](#)

Causal Machine Learning Paper On Mental Health Outcomes

- Conducted an observational study using BRFSS data to examine the impact of adverse childhood experiences (ACEs) on mental health.
- Applied causal machine learning algorithms to determine the average treatment effect (ATE) of each ACE on mental health outcomes.
- Used Uplift Random Forest trees to calculate uplift scores.
- Key findings: Parental depression increased depressive disorder likelihood by 30% and added 5.07 bad mental health days per month; forced sex increased depressive disorder likelihood by 33% and added 5.77 bad mental health days.
- Developed for STEM Fellowship's Inter-University Big Data Challenge 2024.
- [Video Presentation](#)

Swipe-Talk Augmented Reality Project

- Created a "swipe to talk" hand-movement tracking application in mixed reality using the Microsoft HoloLens 2 and Unity Editor in less than 24 hours.
- Designed for non-speaking individuals with autism who may have difficulty with gross motor skills.
- Completed for the Institute of Electrical and Electronics Engineers (IEEE) SIGHT ProjectVoice Hackathon.
- Received 1st place along with a monetary prize.
- [Video Demonstration](#)

Alzheimer's Disease Machine Learning Model

- Created a machine learning classification model which takes in MRI scans as well as patient data and diagnoses patients with 90% accuracy.
- Used Python, Pandas, Keras, and TensorFlow along with the ResNet-50 convolutional neural network.
- [GitHub Repository](#)

Snow Pro

- Developed a 2D platformer using Unity and C# scripts.
- Contains Microsoft Azure PlayFab backend for live leaderboard tracking.
- [GitHub Repository](#)

Portfolio Website

- Developed my own personal portfolio website with React, Three.js, and Vite.
- Used Blender to generate my own 3D renders.
- [Zaid's Portfolio](#)

Lotion – Notes App

- A fully-functional note-taking app built in React.
- Uses Google Authentication as well as AWS DynamoDB Backend.
- Built using Terraform and Lambda handler functions.
- [Lotion App](#)

AWARDS

- 1st Place at IEEE SIGHT ProjectVoice Hackathon - September 2023 ([LinkedIn Post](#))
- 2nd Place at NeurAlbertaTech natHacks Hackathon - November 2023 ([News Article](#))
- 3rd Place at MedTech HackMedTech Hackathon - February 2023 ([LinkedIn Post](#))
- Finalist for Ontario Brain Institute Pitch Competition - May 2024 ([LinkedIn Post](#))