

SAI VASHNAVI JATTU

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Education

University Of Alberta

Honors in BSc. Computer Science with AI Option

Expected Graduation: May 2027

Edmonton, Alberta

Relevant Coursework

- Database management
- **Linear Regression**
- **Logistic Regression**
- Ethics in AI
- **Algorithms Analysis**
- Statistics and Linear Algebra
- Artificial Intelligence
- Graph theory
- **Machine Learning**
- Computer Architecture
- **RL**
- **Computer Vision and Neural Networks**

Technical Skills

Languages: Python, C/C++, HTML/CSS, JavaScript, SQL, Java, MATLAB, React.js, Django

Developer Tools: VS Code, Git, Google Cloud Platform, PyCharm, Google Colab, SharePoint, Android Studio, Matlab

Libraries/Frameworks: Pandas, PyTorch, NumPy, TensorFlow, Keras

AI/ML Models: **Object Detection** (YOLOv1), Neural Networks, Convolutional Neural Networks (CNNs), ResNet,

Transformers model, **VIT**, Recurrent Neural Networks (RNN), **VAE**, **Auto-Encoder**, **GANs**

Mathematics: Real Analysis, Graph Theory, Linear Algebra, Numerical Analysis

Soft Skills: Leadership, Public Speaking, Time Management, Teamwork, Communication, Problem Solving, **Reading and analyzing Research papers**

Experience

Research Assistant

University Of Alberta

May 2025 - Present

Edmonton, Alberta

- Developed a cross-platform **mobile app** using **React Native**, **Expo**, and **Django** to upload step test images and compute control tuning parameters.

Software Engineer

City of Edmonton, Waste Services

Sep 2024 - Apr 2025

Edmonton, Canada

- Automated training for **300+** staff using **Apps Script**, **Python**, **Tableau**, and digitized SOPs, forms, and dashboards for LMS migration.

CMPUT 174 & 229 Courses - Teaching Assistant Lead

University of Alberta

Sep 2024 - Apr 2025

Edmonton, Canada

- Taught and supported over **60+** students in Python, **led weekly lab sessions**, and graded **100+** assignments, enhancing communication and mentorship skills.

Vice President External and Secretary

Undergraduate Association of Computing Science and WiCyS University of Alberta Student Chapter

May 2024 - Apr 2025

Edmonton, Canada

- As VP External and Secretary, built industry and alumni ties, **organized events**, and led **communications** to support computing students and foster a women-focused cybersecurity community.

Projects

RideSafe | Hackathon Winner | Python, Flask, React Native, ViT Model

March 2025

- Developed an AI-driven security app (using pretrained **ViT Model**) to enhance transit safety by detecting real-time threats, alerting security, and enabling rider-reported concerns.

Qusion | Python, Flask, React Native, Firebase

Feb 2025

- Qusion is a mobile app designed to combat fraudulent QR codes. It scans QR codes, analyzes URLs for **security risks**, and checks them against **VirusTotal**, **Google Safe Browsing**, and our own database to provide instant alerts for these links.

Bias Mitigation in Facial Detection Using Latent Resampling | Pytorch, VAE model

Feb 2025

- Implemented a **facial detection model** that adaptively **re-samples training data** to reduce bias using learned latent variables.
- Approach inspired by **Amini et al.**'s research on mitigating algorithmic bias through latent structure learning.

RNN Music Generator | *Pytorch, RNN*

Jan 2024

- RNN Music Generator is an innovative model that uses deep learning with **PyTorch** to **generate original music compositions** by predicting the next note in a sequence of sheet music, utilizing a character-level Recurrent Neural Network (**RNN**).

Scheduler| Hackathon Winner | *Python, Flask, HTML, CSS and JavaScript*

Sep 2023

- Scheduler is a dynamic and responsive schedule-maker that has a nested, priority-based algorithm for tasks which the user considers primary or fixed in their schedule, and secondary tasks which they want to complete but don't know when.

UniMates | *HTML*

Dec 2022

- A one-stop website guide for international Students entering Canada for the first time.