

Aryan Patel

aryan.patel2@uwaterloo.ca • | (437) 339-5154 • | github.com/aryanp05 • | linkedin.com/in/aryanpatel05

EDUCATION

The University of Waterloo

Waterloo, ON

Bachelors of Computer Science and Bachelors of Business Administration with 4.0 GPA

April 2028

- Relevant Coursework: Function Programing, Tools for Software Dev, Algorithm Design & Data Abstraction
- Extracurricular: Hackathon Executive, Computer Science Club, Data Science Club

EXPERIENCE

Software Developer & LLM Engineer

Sep. 2023 - March 2024

A.P.U.G. Club

Waterloo, ON

- Developed LooLearnAI (), a student-focus AI software that assists in academics by answering content-specific questions using course conventions and generating practise material using **OpenAI API, Milvus, and Python**
- Implemented sophisticated Natural Language Processing (NLP) techniques for semantic search and data vectorization, ensuring intuitive query understanding and resource discovery, to increase retrieval speed by 25%.
- Employed streamlined deployment and consistent application performance using the tool Docker.
- Used advanced Prompt Engineering to refine the AI insights into user queries and generating solutions and developed target algorithms including **R.A.G. & R.S.E.** to increase LooLearnAI answer accuracy from 78% to 93%

Software Developer

Sep. 2020 - Nov. 2021

Neonic Wraps

Toronto, Ontario

- Designed and developed a fully functional and attractive e-commerce website using HTML, CSS, and JavaScript to increase customer conversion by 80%
- Managed online inventory and performed database queries using SQL on MongoDB to effectively track items and orders
- Operated an e-commerce business selling a diverse range of tech products, achieving \$10k+ in sales.

PROJECTS

Wildfire Path Predictor

May 2024 - June 2024

- Engineered the Wildfire Path Predictor for the Wildfire AI Hackathon 2024, utilizing PyTorch and Torchvision to create a hybrid model combining CNNs and LSTMs, accurately predicting wildfire spread by processing spatial and temporal data from satellite imagery and climate variables.
- Leveraged satellite data from MODIS, VIIRS, and IBAND to train AI models, incorporating fire weather data, enhancing wildfire prediction accuracy.

GetTrash Garbage Identifier

May 2024 - May 2024

- Created GetTrash, a web app leveraging Python, TensorFlow, and Streamlit for real-time waste sorting through live video scanning and image captioning, achieving third place at the Google Developer SC-hosted Hack With AI event.
- Created a robust garbage classification model using TensorFlow, trained a CNN architecture and leveraging large online data sets of over 16,000+ photos to identify trash to a high accuracy

Meerkat ASL

April 2024 - May 2024

- Developed a sign language interpreter with machine learning techniques and Scikit-Learn leveraging OpenCV to capture a dataset of over 40,000 images
- Implemented a preprocessing pipeline to extract and preprocess hand landmarks using Mediapipe achieving efficient representation of sign language gestures for input into a neural network model

TECHNICAL SKILLS

Programming Languages: Python, C++, C, HTML, CSS, JavaScript, Bash, Git, Racket, SQL

Technologies: Flask, OpenCV, Tensorflow, PyTorch, Docker, Kubernetes, Git, Milvus, Rasterio, Streamlit