

Jawad Arshad

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EDUCATION

University of Toronto (GPA: 3.7)

Toronto, ON

Bachelor of Science in Computer Science, Specialist Program Comprehensive Stream

EXPERIENCE

Full Stack / Blockchain Developer

May 2022 – Present

Dapp Technology Inc

Toronto, ON

- Built a full-stack web application using **NextJS with Typescript, NestJS and Firebase** to allow users to bridge tokens on multiple chains, had over **30+ chains with 4000+ tokens on 15+ bridges**.
- Developed a DeFi Hub application that allowed users to trade, earn and explore in DeFi, with **real time price data shown on a Tradingview lightweight charts**.
- Implemented functions to **firebase function** that completed various tasks, like updating a price document on **firebase store** on a scheduled basis.
- **Deployed** many Smart Contracts to the **blockchain**, like a presale contract, and a lottery contract.

Machine Learning Teaching Assistant

Jan 2024 – Apr 2024

University of Toronto

Toronto, ON

- Taught two Classes per week various topics in machine learning like **regression, classification, clustering, dimension reduction, Bayesian methods, etc.**
- **Worked with the teaching team** to provide a holistic learning experience
- Contributed to the **assessment and evaluation process** through grading assignments, invigilating exams, as well as **providing feedback**.
- **Provided extra help to students** by holding office hours for them to ask questions.

PROJECTS

Langchain | *Python, Git*

Sept 2023 – Dec 2023

- **Contributed** to an open-source python repository called Langchain.
- Developed new tools that allowed **AI agents** to access information on the **google such as google jobs, google finance, google trends, and google lens** by calling a **external API** and parsing the data for the AI agent.
- **Wrote test cases and example docs** for the new tools.

Machine Learning News Article Classifier | *Python*

Jan 2023 – Apr 2023

- Implemented and evaluated classifiers for labeling news articles into five categories using **Naive Bayes, Gaussian class conditional, and k-nearest neighbors classifiers**.

Machine Learning Audio Emotion Classifier | *Python*

Jan 2023 – Apr 2023

- Developed and evaluated an **SVM classifier** and an **SVM classifier with PCA** to predict whether the emotion associated with a human audio signal is positive or negative using Mel spectrogram and chromagram features.

Machine Learning Image Imprinter | *Python*

Jan 2023 – Apr 2023

- Applied **radial basis functions** to restore corrupted images in a painter program.

Machine Learning University Admission Predictor | *Python*

Jan 2023 – Apr 2023

- Developed and compared models for university admission prediction using **linear regression and k-means++**, including clustering the data before applying linear regression.

Machine Learning Image Number Classifier | *C*

Jan 2021 – Apr 2021

- Developed a **machine learning** handwritten number classifier using **kNN** with a **97%** accuracy rate.
- Enhanced the machine learning handwritten number classifier by transitioning from kNN to a **decision tree**, reducing running time from **45 minutes to 12 minutes**.
- Implemented **multiprocessing** to accelerate the classification of 10,000 items, reducing processing time from **45 minutes to 5 minutes** by distributing work across **multiple forked processes and communicating via pipes**.
- Utilized **makefiles** for efficient building and compiling of programs.