Arjun Sarao

arjun.sarao@uwaterloo.ca | linkedin.com/in/arjun-sarao | github.com/DarkHawk727

WORK EXPERIENCE

Full Stack Web Developer   May 2022 – December 2022
Starai Tutoring
- Designed and wire-framed a responsive, multi-page static website based on client specifications in **Figma**.
- Developed the website using **JavaScript (React.js)** in conjunction with **Bulma.css**, hosted it on **GitHub Pages**.
- Implemented sign-up form submission via **Firebase** cloud-function and SMS notifications with **Twilio**.

PROJECTS

Deep Work Tracker | *Web-App for Productivity Tracking.*   September 2023
- Scripted and deployed application interface using **Streamlit**.
- Added metrics such as time between accomplishments, churn-rate, and activity graph
- Stored data in **Supabase**, created custom **SQL** commands to query, integrated with **Python** client.

Personal AI | *LLM-Powered Web-app for University Help.*   August 2023
- Created and deployed a multi-page front-end using **Streamlit**.
- Integrated **GPT-4** via **LangChain** to provide enhanced, domain-specific, knowledge such as PDF Q&A, Flashcard Generation, and Math Help via **sympy**.
- Augmented retrieval with **chromadb** to store text embeddings on disk to save repeat costs and add additional context to queries.

Philosopedia | *AI-powered Flutter app for Stanford Encyclopedia of Philosophy.*   August 2023
- Created and wireframed UX using **Figma**, Developed **Flutter (Dart)** application with use of **RapidAPI** for content aggregation.
- Rendered text in frontend using **bionic-reading**.
- Passed entry preamble to **HuggingFace** (BART) for summarization and then onto **OpenAI's GPT-4** for question generation.

EDUCATION

Bachelor of Computer Science (CO-OP)   University of Waterloo
                                                                 Sept. 2022 – present

- Member of the Badminton, Computer Science, and Data Science Clubs.
- Awarded the President's Scholarship.

SELF LEARNING

Learn Deep Learning for Coders with fastai and PyTorch   Present
- Programming exercises designed to teach **PyTorch**, **NumPy**, **Pandas**, **Matplotlib**, and **fastai**.

Machine Learning Specialization | *Coursera*   August 2022
- Supervised Machine Learning: Regression and Classification (**Linear Regression, Logistic Regression**)
- Advanced Learning Algorithms (**Neural Networks, Decision Trees**)
- Unsupervised Learning, Recommenders, Reinforcement Learning (**Clustering, Anomaly Detection, Collaborative Filtering, Deep Q-Learning**)

Deep Learning Specialization | *Coursera*   July 2022
- Neural Networks and Deep Learning (**NNs**)
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization, and Optimization
- Convolutional Neural Networks (**CNNs**)
- Sequence Models (**RNNs, GRUs, LSTMs, Transformer Networks**)

PERSONAL ACHIEVEMENTS

Cadets: Appointed Regulating Petty Officer, Obtained CanSail 1&2, achieved rank of Chief Petty Officer 2nd Class
Sports: Represented school at city and district levels for badminton and swimming.
Hackathons: 2x Google Cloud Prize Recipient (*UncommonHacks, Hack-o-Lantern*), 1st place People's Choice (*WinHacks 2021*), Best Theme Hack (*PreHackstoric*)