

Rhythm Chawla

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EDUCATION

University Of Waterloo

Waterloo, ON

Honours Bachelors of Computer Science

April 2028

- Recipient of the **President's Scholarship of Distinction**, awarded for exceptional academic achievement.
- Pursuing a specialization in **Artificial Intelligence** and a minor in Entrepreneurship.
- Coursework: Object Oriented Programming(OOP), Elementary Algorithm Design and Data Abstraction, Tools and Techniques for Software Development, Computer Organization and design, Statistics, Linear Algebra

EXPERIENCE

Full-Stack Developer

August 2024

G12Uni, Enterprise COOP | ReactJS, Python, Flutter, Dart, Docker, GCP

Waterloo, ON

- Co-founded a global platform connecting over **1,500** university students, driving collaboration and innovation through seamless integration of APIs for Google Meet, video calls, maps, and chat systems.
- Redesigned and developed the G12 website and mobile app using Vite ReactJS, Flutter, and Dart, enhancing user engagement by **25%** and meeting student demand with a native mobile solution.
- Trained and deployed NLP models for dynamic content scanning (e.g., Reddit and YouTube), improving user interaction with a satisfaction rate of **85%** through Docker deployment.

PROJECTS

MineGuard, Hack the Valley, Toronto | *React.js, Firebase, Node.js (Express), Machine Learning*

October 2024

- * Built a platform focused on health and environmental sustainability for miners, enhancing air and soil quality analysis through the implementation of machine learning models like Random Forest and Decision Tree Regression.
- * Developed a chatbot using OpenAI API to assist miners and site managers in quickly obtaining critical environmental data and insights.
- * Successfully delivered a scalable solution under a tight deadline, showcasing effective time management and innovative problem-solving skills while working independently.

Rhythm, Hack the Hill (Hackathon), Ottawa | *Python, Flask, ReactJS*

September 2024

- * Developed an AI-powered voice coach utilized by over **100** beta testers, leveraging Meta's **Wav2Vec2** model and Apple's **SEP-28K** dataset to detect stuttering and provide real-time feedback, enhancing public speaking confidence.
- * Delivered feedback on speech modulation and timing through pitch and pace analysis features using **OpenAI's API, librosa, and SciPy**.
- * Designed a front-end with **ReactJS and Particle.js** that increased user retention, enhanced interactivity showcasing creativity and a strong focus on user experience with my team.

Doctor AI LLM | *Llama2, Hugging Face, Python, NLP, Machine Learning*

August 2024

- * Fine-tuned a Large Language Model (LLM) using **Llama2** from Meta for healthcare applications, leveraging advanced NLP and machine learning techniques to enhance medical text comprehension and response accuracy.
- * Utilized Hugging Face libraries for efficient model training, deployment, and data augmentation, ensuring high-quality output in the medical domain.
- * Implemented data preprocessing, feature extraction, and performance optimization strategies, gaining expertise in adapting pre-trained models for specialized use cases.

CS GPT Pro, (Hackathon) | *Python, Cython, C++, CUDA, Streamlit, Hugging Face Transformers, RAG*

May 2024

- * Developed an AI chatbot to assist first-year university students in computer science and engineering courses, providing accurate, course-specific responses based on a robust dataset of academic questions and answers.
- * Implemented a user-friendly interface for seamless navigation and course selection, enabling users to choose their university and specific courses for tailored guidance.
- * Utilized **Hugging Face Transformers** and **RAG (Retrieval-Augmented Generation)** to enhance response accuracy, and deployed the model using **Streamlit** for accessibility.

SUMMARY

Languages: Python, R, JavaScript, Typescript, Java, C, C++, Racket, HTML, CSS, PostgreSQL, SQL, Dart

AI Frameworks & Libraries: TensorFlow, Hugging Face, Librosa, SciPy, Gymnasium, Pandas, NumPy, Matplotlib

Technologies & Frameworks: ReactJS, NextJS, MongoDB, NodeJS, Express, NoSQL, Flutter, Firebase, Supabase, Django, Docker, Cpanel, SASS, Eclipse, Lang Chains, Linux, Bash, UI/UX Design

Developer Tools: Git, GitHub, Bash, Valgrind, Debugging, GDB, shell scripting, Google Cloud Platform(GCP)

Machine Learning Models: Wav2Vec2, Llama2, DCQN, A3C, Regressions, Courses done on Udemy for AI.