

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

Associate Conversation Design Intern

August 2025

Cresta (Series D AI Startup, Remote) | Python, LLMs, Jupyter, Dialogflow CX, Google Apps Script *Palo Alto, CA*

- Developed an LLM-powered redaction auditor that reduced manual transcript QA time by **60%**, automatically flagging sensitive or policy-violating content across thousands of weekly interactions.
- Automated annotation tracking and data labeling workflows using **Google Apps Script**, saving the design team **10+ hours/week** across 3+ enterprise projects by eliminating repetitive ops work.
- Performed QA and iterative tuning on Cresta's **Opera** and **Director** platforms for 10 client deployments, improving intent coverage and bot response accuracy by **30%**.

Software Engineer

August 2024

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

Waterloo, ON

- Co-founded a global platform connecting over **1,500** university students worldwide, fostering collaboration, mentorship, and innovation through networking and resource-sharing opportunities.
- Redesigned the G12 website using Vite ReactJS, improving user engagement through **Tailwind CSS following SaaS principles**. Added multiple APIs for Google Meet, video calls, maps, avatars, chatting systems, chatbots
- Trained **NLP** models on diverse datasets to enable features like Reddit and YouTube scanning, enhancing user engagement. Deployed using Docker.

PROJECTS

StrumSpace, SpurHacks (Hackathon) | YOLOv8, OpenCV, Flask, React, Vite, 3JS, librosa

June 2025

- * Built an AI-powered AR guitar tutor using **YOLOv8 and audio verification** to guide finger placement and validate chords in real-time.
- * Trained a custom CV model to detect fret zones via webcam, overlaid chord diagrams with **3JS**, and used **real-time pitch detection** to verify strumming accuracy.
- * Enabled interactive, feedback-rich practice for 100+ users struggling with traditional guitar learning apps by blending vision, sound, and UI.

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 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.

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, Librosa, SciPy, Gymnasium, Pandas, NumPy, Matplotlib

Technologies & Frameworks: ReactJS, NextJS, MongoDB, NodeJS, Express, NoSQL, Flutter, Firebase, Supabase, Streamlit, 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, RAG, Courses done on Udemy for AI.