

Shraddha Singh

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Education

Dalhousie University

Sep 2021 – May 2025

Bachelor of Science in Computer Science and Physics — GPA: 3.85/4.3

Halifax, NS

- Relevant Coursework: Data Structures and Algorithms, Database Systems, Software Development, Web Design and Development, Theory of Computer Science, Network Computing, Algorithms I, Operating Systems

Experience

Software Engineer Intern

June 2024 – August 2024

Radical AI

Remote

- Leverage technologies such as OpenAI, Node.js and React to develop the AI teaching model, ReX.
- Developed NestJS powered API endpoints and utilized the Firebase Client SDK to send HTTP requests to Firebase Functions API endpoints, ensuring future scalability and communication between front end components and the Firebase ecosystem.
- Executed rigorous unit testing with Jest to validate the reliability and functionality of intricate data visualization elements, resulting in enhanced code stability and maintainability throughout the application.

Software Engineering Intern

May 2023 – December 2023

Avenew

Halifax, NS

- Implemented a real-time error detection and visualization framework with 85% accuracy for the axle detection system using React v17, TypeScript, and Recharts.
- Built application authentication and session management features through Okta REST API.
- Deployed the axle detection framework on AWS using Kubernetes in EKS and Helm for scalability.
- Created and expanded multiple Jest unit testing suites, increasing the team's code coverage by approximately 17%, which accelerated development by increasing our team's confidence in releases.
- Built a CRUD web app with Angular 13, and Node.js, utilizing PostgreSQL for the production database, to enhance efficiency by 25%.

Undergraduate Research Assistant

March 2023 – April 2024

Supervisor: Dr. Penghao Xiao

Halifax, NS

- Worked on a project that utilizes CGNN for predicting battery materials using PyTorch for model training, developing and optimizing CUDA kernels for GPU-accelerated KMC simulations near grain boundaries.
- Presented the research work at the Canadian Chemical Engineering Conference (CSCChE), Calgary 2023.

Undergraduate Teaching Assistant

January 2023 – December 2023

Dalhousie University

Halifax, NS

- Taught concepts of computer systems such as data and program representation, program translation, and operating systems for CSCI 1120 in assembly and C (Introduction to Computer Systems) course.
- Developed and maintained GitLab CI/CD pipelines for students to streamline the assignment submission process, automate the testing, and ensure code quality, which enhanced the overall learning experience.

Projects

Speech Translation with ASL to Text Conversion | *OpenCV, MediaPipe, Huggingface, Cohere, Docker*

- Developed a web-based video calling platform, which makes use of multi-language speech translation system with Wave2Vec for speech-to-text, Cohere's Multilingual model for text translation, and SpeechT5 for text-to-speech.
- Achieved 94% accuracy in real-time ASL transcription with CNN-LSTM and Vision Transformer models.
- Deployed the application using Docker and GCP Kubernetes Engine.

Music Recommendation System | *Python, Pandas, Scikit-learn, Spotify Web API, React*

- Created a personalized music recommendation web app using React and Spotify API and implemented cosine similarity technique to generate songs based on user's listening history.
- Executed data exchange between backend server and client server in JSON format using Axioms instance.

Halifax Food Delivery Android App | *Kotlin, Android Studio, Firebase, RESTful APIs*

- Developed a Kotlin-based Android app with RESTful APIs, Firebase for real-time data and authentication, and PayPal integration, enhancing order placement, menu browsing, and real-time tracking via Google Maps API, supporting 85+ local businesses.

Technical Skills

Programming Languages: Java, C++, GoLang, Typescript, Python, JavaScript(ES6), C, C#, SQL, R, PHP, Scala

Frameworks and Libraries: React.js, Node.js, Angular, XGBoost, pandas, sklearn, PyTorch, Tensorflow, Spark

Development Tools: AWS (S3, Neptune, EC2, Lambda, EKS, Sagemaker), Docker, Kubernetes, Jenkins, Selenium, Harness