

# Armaan Singh Chahal

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## Objective

Software engineer with a focus in full-stack web development and AI/ML systems. Experienced in building scalable backend infrastructure, cloud-integrated pipelines, and real-time inference systems using React, Node.js, AWS, TensorFlow, and PyTorch

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## Work Experience

### Back-End Web Developer – CJSF 90.1 FM, SFU

Sept 2024 – Dec 2024

- Developed backend with Node.js and Directus CMS, integrated with React frontend
- Built RESTful APIs for audio content and reduced database latency by 30%
- Added role-based authentication and improved CMS efficiency by 40%

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## Projects

### Skin Lesion Classification AI (PyTorch, AWS)

[\(link to website\)](#)

Feb 2025 – April 2025

- Led a team of 5 to train **ResNet-50 CNN** to classify dermatoscopic images with **>90% accuracy**
- Automated preprocessing, data labeling, and model evaluation pipelines
- Created dashboards using Tableau to visualize model performance metrics

### MRI Brain Tumor Detection (TensorFlow, AWS)

[\(link to website\)](#)

Feb 2025 – April 2025

- Built **TensorFlow classifier (91.38% accuracy)** with S3 pipeline, SageMaker, and Flask UI
- Created scripts for relabeling, edge-case filtering, and image reorganization
- Managed deployment using Deep Learning AMIs and virtualenvs

### Social Media MERN Stack App (MERN stack)

Jan 2025 – Mar 2025

- Built **full-stack** app with chat and JWT authentication
- Designed secure **REST APIs** and role-based access control with MongoDB logging
- Boosted user engagement through AI-driven content discovery

### Quiz Portal (Java, MySQL)

May 2024 - Jul 2024

- Created login-secured quiz app with dynamic question generation and scoring
- Reduced load times 30% via **SQL indexing** and pagination
- Integrated CSV processing and leaderboard display

### Weather Information App (HTML, JS)

[\(link to website\)](#)

Jun 2024 – Jul 2024

- Developed responsive **frontend** for 10K+ cities using OpenWeatherMap API
- Enhanced UX with visuals and real-time weather-based background changes

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## Technical Skills:

**Languages:** JavaScript (React, Node.js), Python, Java, SQL, C++, C, Haskell

**Frameworks/Libraries:** React, Next.js, Express.js, Spring Boot, Tailwind, Bootstrap

**Databases:** MySQL, PostgreSQL, Redis, Firebase, MongoDB

**Backend:** REST APIs, JWT, Role-Based Access Control, WebSockets

**Cloud/DevOps:** AWS (EC2, S3, Lambda), Docker, CI/CD, TDD, Git

**AI/ML Tools:** TensorFlow, PyTorch, OpenAI API, Tableau, Matplotlib, OpenCV, SageMaker

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## Certifications

- AWS Certified Cloud Practitioner
- AWS AI Practitioner (*Ongoing*)
- AI Specialization: AutoML, PyCaret, GANs, NLP

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## Education

### BSc. Computing Science

(expected graduation: dec 2026)

Minor: Statistics – Simon Fraser University

GPA: 3.40