AYUB HUSSEIN ALI

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EDUCATION

University of Alberta

Expected Dec 2026

B.S. in Computing Science Specialization

Edmonton, AB

Relevant Coursework: Data Structures & Algorithms, Software Engineering, Databases & File Management Systems, Search Planning & Artificial Intelligence, Discrete Mathematics, Linear Algebra, Calculus I & II

EXPERIENCE

Back End Developer Intern

Sep 2024 – Dec 2024

Ment (Remote)

Hamilton, ON

- Led the development of a real-time transcription tool using **OpenAI API** and **AWS Amplify**, automating speech-to-text conversion and reducing manual note-taking by 80%.
- Implemented real-time streaming with AWS Amplify to ensure low-latency conversation transcription, enhancing mentor-mentee collaboration.
- Optimized GraphQL backend services by caching API responses and restructuring database queries, improving response times by 27% and system scalability.

Data Science Intern

May 2024 - Aug 2024

Hiswai Analytics (Remote)

Vancouver, BC

- Analyzed user retention trends for search engines and websites, using **SQL** and **Python** to track bounce rates and session durations across **50,000+ users**, identifying key drop-off points and increasing returning users by **15**%.
- Conducted behavioral analysis on organic vs. paid traffic, uncovering a 22% higher retention rate for organic users, leading to a refined marketing strategy.
- Worked closely with the client to optimize website navigation and search algorithms, resulting in a 12% increase in user retention and a more intuitive browsing experience.

Machine Learning Intern

May 2023 - Aug 2023

M2M Tech (Remote)

Vancouver, BC

- Completed structured training on machine learning fundamentals, delivering **5+ projects** with data preprocessing, feature engineering, and model evaluation using **Python**, **scikit-learn**, **Bokeh**.
- Applied k-means clustering on 10,000+ data points, improving segmentation accuracy by 15% through hyperparameter tuning.
- Presented model insights to the client, providing actionable recommendations and refining predictive models to align with real-world constraints.

Projects

PickMe - Lottery Event Mobile App | Java, Firebase, Android Studio

Sep 2024 - Dec 2024

- Developed an event-based lottery application in Java, utilizing Firebase Firestore for real-time database management and event synchronization.
- Integrated QR code scanning for ticket validation, geolocation tracking for event verification, and Firebase authentication for secure user access.
- Implemented Agile development practices, actively participating in sprint planning, iterative development, and code reviews to enhance app reliability and user experience.

Blogger - Full Stack Blog App | Next.js, MongoDB, Tailwind CSS, Node.js

Feb 2024

- Developed a full-stack blog application using Next.js and Node.js, featuring a seamless frontend UI with Tailwind CSS and a scalable backend with MongoDB.
- Implemented an admin dashboard with role-based authentication, allowing administrators to create, edit, delete, and manage blog posts efficiently.
- Designed and optimized RESTful APIs to handle CRUD operations, ensuring fast data retrieval and smooth interaction between the frontend and backend.
- Enhanced security with JWT authentication and middleware validation, preventing unauthorized access and ensuring secure user authentication.

TECHNICAL SKILLS

Programming & Scripting: Python, C, C++ Java, Golang, JavaScript, TypeScript, HTML5, CSS3, Tailwind CSS

Frameworks & Libraries: React, Next.js, Node.js, Express.js, Flask, GraphQL, scikit-learn, Matplotlib, Bokeh

Developer Tools & Databases: Git, Linux, AWS (Amplify, QuickSight, S3, DynamoDB), Firebase, Supabase, SQLite, MongoDB, Docker, GitHub Actions, CI/CD Pipelines, Postman