Sumit Kharbuja

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SUMMARY

Computer Science (BSc.CSIT) graduate with a strong foundation in software development and interests spanning frontend, backend, full-stack, AI, and ML. Experienced in creating user-centric solutions and contributing to innovative, high-impact projects through effective teamwork

EDUCATION

Kathmandu College of Technology, Bhaktapur, Nepal   **Sep 2020 – Jun 2025**
Bachelor of Science in Computer Science and Information Technology (BSc.CSIT)

Advance Academy Secondary School, Kathmandu, Nepal   **Dec 2072 - July 2075**
Plus, Two in Science

Experience

Online Test & Learning Platform (Next.js, FastAPI, React Native, MongoDB, PostgreSQL, LLMS,Redis)   Aug 2025-Still

- Developed a scalable online assessment platform with Next.js (web interface for daily tests, payments, notices, and user dashboard), React Native (mobile app for proctored real exams) and backend fastapi(Microservice Architecture)
- Integrated proctoring features (tab switching, split-screen, focus change detection) to ensure test integrity in the mobile app.
- Designed backend services using FastAPI, managing authentication, payments, result processing, and AI-powered question generation with LLMs.
- Utilised PostgreSQL for user data, results, payment, and question storage; integrated MongoDB for storing notices.
- Integarte LLM for Question generation.
- Deployed backend and frontend on Render, ensuring continuous deployment and performance optimisation via Uvicorn and async APIs.

   Deployment: **https://app.sumitkharbuja.com.np/**

Full Stack Developer: IT Hive Solution PVT LTD (AS Intern)   **Dec 2024 -Jun 2025**

- Developed and maintained web applications using Next.js for the frontend and FastAPI for the backend.
- Designed and integrated RESTful APIs for seamless communication between frontend and backend.
- Worked with PostgreSQL and MongoDB databases for data storage and management.
- Implemented authentication, authorization, and API integration features.
- Collaborated with the development team to improve application performance and scalability.
- Used Git/GitHub for version control and Agile methodology for project management.

Full Stack Development: Personal Project   **Apr 2024 – Sept 2024**
AI-Voice Assistance Retail shop (Next.js, FastAPI, MongoDB, Qdrant, LLMS) Full-Stack Development

- Developed an AI-voice assistance app where, through voice query, AI assistance does all the things, such as adding, deleting, and proceeding with searching.
- Used Automatic Speech recognition and transcribe to text.
- Text input taken for query handling, and cosine similarity and vector similarity search are performed for image-text embedding features and displayed in the UI.
- The clip model is fine-tuned using RESNET with fashionminst datasets from Kaggle.
- WebSocket is implemented to reduce latency.

Chatbot: Personal Project   **May 2024 – Jun 2024**

- Developed a sophisticated chatbot system leveraging Natural Language Processing (NLP) techniques. Implemented tokenization and stemming using the NLTK library for efficient text processing.
- Created a training pipeline to classify user intents using a combination of bag-of-words and one-hot encoding techniques.
- Utilized Lancaster Stemmer for word normalization and dimensionality reduction.
- Designed and managed a JSON-based intent dataset to train the chatbot model.
- Integrated and fine-tuned the chatbot model to recognize user intents and respond effectively and accurately.

E-commerce Website: Personal Project   **OCT 2023- Feb 2024**

- Developed highly interactive and responsive web applications using Next.js.
- Managed Backend with Sanity.io.
- Utilized Redux for state management, improving application performance and maintainability.
- Integrated RESTful APIs to fetch and display dynamic content, enhancing user experience.

SKILLS

• Python	• Docker	• Agile
• React	• Azure	• Waterfall
• TailwindCSS	• SQL/NoSQL	• CI/CD pipelines
• JavaScript	• AI/ML	• Vector-DB

CERTIFICATIONS

Full-stack Developer (Python + React) from IT Hive Solution Pvt LTD   **July 2025**