Aayush Shrestha

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Tinkune, Kathmandu, Nepal

Education

St. Xavier's College   Matighar, Kathmandu
Bsc. CSIT Computer Science and Information Technology   2026

Experience

Freelance R&D Data Engineer Trainee   Remote
AuditCity   *July, 2025 - Present*
· Worked in a research-driven role focused on designing experimental data pipelines and building PoCs for automated information extraction.
· Used TypeScript, Python, Docker, PostgreSQL, GitHub, Gemini, SERP APIs, and browser-automation and web-scraping utilities.
· Developed a unified extractor to convert unstructured webpages from various sites into structured schemas (titles, published documents, publication dates, and main- content).
· Built fact-checking and automated search data-collection pipelines using search results and LLM reasoning.

Projects

RelevanCite – AI Research Assistant   **[GitHub Repo] [Blog]**
· Built a tool for reviewing citations, and interacting with documents via Retrieval-Augmented Generation (RAG). Used Streamlit for the front end, Hugging Face models for embedding generation and inference, and ChromaDB to store embeddings for semantic retrieval.

Sabda – Nepali Vocabulary Learning App   **[Play Store] [Blog]**
· Designed and Developed a mobile app to learn Nepali vocabulary as a habit using Flutter and Firebase. Managed frontend, backend, assets, and released the final product on the Play Store.

PAYO – A Customer-Initiated Payment System   **[GitHub Repo] [Blog]**
· Researched, designed and developed a payment system where customers generate QR codes while offline to start payment transactions. Implemented in React Native and ExpressJS, with TypeScript. Included concepts of encryption, hashing, and server–client architecture for secure payment handling.

Crop Yield Prediction – Machine Learning   **[GitHub Repo] [Blog]**
· Worked on localized crop-yield prediction for Nepal using collected regional data. Performed data collection, and cleaning, followed by model training, tuning, and validation. Conducted exploratory analysis and built machine-learning models to estimate yield under different conditions.

SFML Planet Defender   **[GitHub Repo]**
· Developed an Asteroids-style game in C++ using SFML, built the render loop, game progression, enemy generation, collision detection, and memory management logic following OOP paradigms.

Skills

Programming Languages: Python, TypeScript, C++, HTML, CSS,
Frameworks & Libraries: Flutter, React, Streamlit, Hugo,
Concepts & Methodologies: Object-Oriented Programming (OOP), MVC architecture, RESTful APIs
Databases: MySQL, PostgreSQL, Firebase
Tools & Platforms: Git, GitHub, Docker, Linux
Testing: Pytest
Machine Learning & AI: Working with ML/AI models and APIs

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