

# Aayush Raut

Software Engineering Student · AI & Full-Stack Systems

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## EDUCATION

### BSc (Hons) Software Engineering

2025 - Present

Softwarica College of IT & E-commerce · Affiliated: Coventry University, UK · Kathmandu, Nepal · Expected 2028

Focus: Artificial Intelligence · Full-Stack Systems · Distributed Architectures

### +2 Science (Mathematics, Physics, Computer Science)

2022 - 2024

National Education Board (NEB)

GPA 3.34 / 4.0 · Distinction in Computer Science

## PROJECTS / ENGINEERING WORK

### AI Meeting Transcription & Summarization System

2025

Python · LLM APIs · React

Audio processing pipeline that segments meeting recordings, sends chunks to an LLM API for transcript generation and abstractive summarisation, and streams output tokens to a React UI.

- Designed prompt templates for structured, speaker-attributed JSON output; applied chunking to handle long-context audio inputs
- Implemented server-sent events for progressive rendering of partial summaries before full response completion

### Videos to Notes App

2025

React · Vite · Gemini 2.5 Pro · Vercel

Client-side web application that submits video files directly to the Gemini 2.5 Pro multimodal API and receives structured, timestamped markdown notes as a streaming response.

- Uses Gemini's native multimodal input interface; no separate transcription service or frame-extraction pipeline
- Incremental markdown rendering via client-side streaming; partial notes appear as tokens arrive

[github.com/AayuAmor/Client\\_Videos\\_to\\_Notes\\_App](https://github.com/AayuAmor/Client_Videos_to_Notes_App)

### AI Research Assistant: Multi-Agent System

2025

Python · LangChain · OpenAI API · React

LangChain-based system with three coordinated agents: a retriever agent performing vector search over a document corpus, a synthesis agent for cross-document summarisation, and a QA agent generating source-grounded responses.

- Designed shared memory state and inter-agent communication using LangChain's agent executor and tool abstractions
- Each final response includes citation traceability to specific retrieved documents, surfaced in a React frontend

### StudentApp

2025

React · Vite · JavaScript

Single-page application implementing academic productivity tools: task prioritisation with deadline tracking, a Pomodoro timer, a grade calculator with GPA computation, and a spaced-repetition flashcard system.

- Built without external runtime dependencies; state managed through custom observer patterns in vanilla JS

[github.com/AayuAmor/StudentApp](https://github.com/AayuAmor/StudentApp)

## TECHNICAL SKILLS

### Programming Languages

Python, JavaScript, Rust

### Frontend

React, Next.js, TypeScript, Tailwind CSS, HTML5

### Backend

Node.js, Express.js, Django, REST APIs

### Databases

PostgreSQL, MongoDB, MySQL

### DevOps & Tools

Docker, Git, Linux, Vite

## RESEARCH INTERESTS

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- LLM orchestration and multi-agent system design
- AI-native software architectures and developer tooling
- Distributed inference systems and scalable LLM serving
- Human-computer interaction in AI-assisted engineering workflows

## ACHIEVEMENTS

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### Hackathon Competitor, 2 Wins / 5 Events

2025

Competed in five hackathons; won three. Projects spanned AI systems and full-stack web applications, built and demonstrated under time-constrained conditions.

### Hult Prize Competitor

2025

Participated in the Hult Prize campus round; developed and presented a social-impact venture concept to competitive evaluation panels.

## ACTIVITIES

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### Co-Founder, Kaizens

2025

Co-founded an early-stage wellness company; responsible for initial product decisions and operations.

### Black Belt, 3rd Dan, Taekwondo

2023

Achieved 3rd Dan certification through multi-year competitive training.