Ishan KC

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Summary

Final-year Computer Science student who ships AI-integrated full-stack products with Next.js, TypeScript, and LLM APIs (Gemini, DeepSeek via OpenRouter, Vapi voice). Deployed a live voice-interview app on Vercel and co-led AI integration for a five-person team, backed by structured HCI research.

Education

Kathmandu University (KU) 2023 — 2027
Bachelor of Science in Computer Science, Dhulikhel, Nepal

Technical Skills

AI & LLM Development: Gemini API, OpenAI API, OpenRouter, DeepSeek, Vapi (Voice AI), Vercel AI SDK, Prompt Engineering, AI Agents, Vector Databases (Supabase)

Languages: TypeScript, JavaScript, Python, C, C++, HTML, CSS

Frameworks & Backend: Next.js, React, Redux Toolkit, Node.js, Express.js, Flask, Vite, REST APIs, Zod

Databases & ORM: PostgreSQL (Neon), MongoDB, Firebase, Supabase, Drizzle ORM

Deployment & Tools: Vercel, Git, GitHub, Firebase Auth, NetworkX

Technical Projects

Intervia — AI-Powered Interview Preparation Platform *GitHub Link*
Next.js 15, TypeScript, Firebase, Vapi, Gemini, Vercel AI SDK

- Enabled real-time voice-native mock interviews with instant structured feedback, as measured by unlimited on-demand practice sessions on a live Vercel deployment, by integrating Vapi and Gemini through the Vercel AI SDK.
- Secured user sessions and AI output, as measured by HTTP-only cookie sessions and Zod-validated feedback schemas, by building Firebase-backed authentication with server-side validation.

SajiloSite — AI Website Builder *GitHub Link*
React, Express, MongoDB, Firebase Auth, DeepSeek, OpenRouter

- Turned natural-language prompts into responsive websites and apps, as measured by one-click deployment to public site URLs, by co-leading AI integration for a five-person team using DeepSeek via OpenRouter.
- Enabled in-browser editing of generated sites, as measured by a live Monaco editor with built-in AI chat, by adding Firebase authentication and editor features to the platform.

Learnify — AI-Assisted Course Platform *GitHub Link*
Next.js, Drizzle ORM, Neon PostgreSQL, Gemini API

- Automated course creation, as measured by AI-generated course structure, chapter content, and banner art, by integrating Gemini APIs into a Next.js platform with a professor approval workflow.
- Delivered the full data layer for courses and learner progress, as measured by 10+ REST API routes on a Neon PostgreSQL schema, by modeling and querying the data with Drizzle ORM.

Shortest Path Visualizer — Multi-Modal Campus Routing Tool *GitHub Link*
Python, Flask, NetworkX, JavaScript

- Enabled side-by-side comparison of Dijkstra and Bellman-Ford, as measured by results across a 50-node, 103-edge weighted campus road network, by building a Flask API with NetworkX routing utilities.
- Made algorithm behavior inspectable, as measured by step-by-step views of visited nodes, explored edges, and final paths for walking, vehicle, and multi-modal parking routes, by building an interactive JavaScript frontend.

Research

A Comparative Usability Study of Voice Input and Touch Interaction for Completing Small Screen Mobile Tasks
Ongoing Research, 2026
Co-Author | COMP 341, Human-Computer Interaction | Under the supervision of Dr. Sushil Shrestha, Kathmandu University | Co-authored with Pranav Koirala and Diksha Sharma

- Investigated whether voice input offers genuine, rather than merely theoretical, usability value over touch by designing and conducting a 64-respondent quantitative survey spanning 10 real-world task and context scenarios.
- Applied Nielsen's usability heuristics and Norman's design principles to isolate hand unavailability and motor accessibility, rather than general distraction, as the specific conditions that reverse user preference toward voice.
- Currently extending the study with additional moderated usability testing ahead of submission, and translating findings into actionable interface design recommendations including confirmation-before-execution and contextual voice surfacing.

Certifications

The Fullstack Developer Path | *Scrimba, 108.4 hours, 2,056 lessons* 2026
Learn AI Agents | *Scrimba, 2 hours, 30 lessons* 2026