

Aarab Nishchal

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Technical Skills

Languages: JavaScript, TypeScript, Python, SQL, HTML, CSS

Web & Frameworks: React, Next.js, Node.js, Express, Hono, Angular, Django, FastAPI, Tailwind CSS, Shadcn UI

Databases & Cloud: PostgreSQL, MongoDB, Supabase, Neon, ChromaDB, Convex, AWS EC2, Cloudflare R2

AI / ML & LLMs: PyTorch, LangChain, Ollama, Groq, VAPI, Whisper, Gemini, OpenRouter, RNN/LSTM

Tools: Git, GitHub, CI/CD, Jenkins, n8n, Trigger.dev, Transloadit, Prisma, Zod, Zustand, Clerk, REST APIs, Postman, Jira

Experience

Ascend HSI

Jul 2026 – Present

AI Engineer Intern

Remote

- Building AI-powered features for internal SaaS products, integrating **LLM** providers into production workflows
- Developing **AI agents** to automate repetitive business processes across case management, CRM intelligence, and media placement systems
- Supporting integration of AI services into web-based applications, working across prompt engineering, automation, and data pipeline tasks
- Contributing to internal documentation and research on applied generative AI use cases for the company's SaaS platform

Unstop

Sep 2024 – Jun 2026

Software Developer Intern

Remote

- Integrated AI-driven **n8n** automation workflows across internal REST API endpoints and a custom CMS, adding white-label support and dynamic window-title configuration
- Built an AI workflow system to auto-generate and validate vendor assignments, cutting creation and validation time by **60 to 70 %**
- Enhanced front-end UI components to surface the new workflow system, streamlining vendor-facing task flows
- Managed CI/CD pipelines via Git and Jenkins, maintaining consistent deployments across environments
- Tracked sprint progress and maintained technical documentation in Jira and Confluence

Projects

Koda-Arc | React 19 · OpenTUI · Hono · Prisma 7 · PostgreSQL · Zod · TypeScript · Bun

GitHub

- Architected a full-stack **monorepo** coding agent CLI with four packages: a **React 19** terminal UI, a **Hono** API server, a **Prisma/PostgreSQL** data layer, and a shared type-safe contract layer
- Built the terminal interface with a custom themeable component system, command palette, and session management using React 19 and **OpenTUI**
- Designed the Hono based API server to handle **AI response streaming**, tool execution, and session CRUD operations, backed by Prisma 7 and PostgreSQL
- Engineered shared **Zod** schemas and a model registry across all packages to keep the CLI, server, and database layers consistent and type-safe

NextFlow | Next.js 16 · React Flow Renderer · Trigger.dev · Transloadit · Gemini · Neon · Prisma

GitHub | Live

- Built a full-stack **AI workflow builder** using **Next.js 16** and **React Flow Renderer**, letting users compose LLM and media-processing pipelines with draggable, connectable nodes
- Designed a **Trigger.dev** orchestration function that reads the node graph on execution and routes each node type, image nodes to **Transloadit**/FFmpeg for cropping and text nodes to **Gemini** for LLM calls, to its own background function
- Implemented image and audio processing nodes using Transloadit and FFmpeg, with **Cloudflare R2** for asset storage and **Neon** PostgreSQL via Prisma for persisting node state after every workflow step
- Added **Clerk** authentication, Zod-validated forms, and **Zustand** state management, with a Shadcn UI and Tailwind CSS interface for the workflow canvas

TestIQ | LangChain · ChromaDB · Ollama · Tree-sitter · Python

GitHub

- Built a CLI **RAG pipeline** using **LangChain** and **ChromaDB** to analyze codebases and auto-generate unit tests, achieving 60 passing tests across 4 development phases
- Engineered a self-correcting validation loop with **Tree-sitter** (AST parsing) and **Ollama** (local inference) to eliminate invalid test output before finalization

Ideascribe | Convex · Clerk · React · BlockNote · Edgestore

GitHub | Live

- Engineered a note taking application for developers, integrating **BlockNote** for dynamic rich-text editing, **Convex** for rapid state synchronization, and Edge Store for scalable cloud asset management

Education

B.Tech, Computer Science & Engineering

2022 – 2026

Kalinga Institute of Industrial Technology

Certifications

- **AWS Certified Cloud Practitioner** – Amazon Web Services
- **Scientific Computing with Python** – freeCodeCamp
- **AMCAT Certified** in Software Development & Database Management – Aspiring Minds
- **Problem Solving Certificate** – HackerRank