

Arpan Roy Chowdhury

AI NATIVE SOFTWARE ENGINEER

arcxx1995@gmail.com | arpanroychowdhury.me | +91 9804933234 | Bengaluru, India

PROFESSIONAL SUMMARY

Full-stack software engineer and AI-native builder who designs, builds, and ships production applications end-to-end — backend services, frontend interfaces, and the AI systems that power them. Experienced across the full lifecycle: data modeling and API design, LLM orchestration and agentic workflows, responsive frontends, and containerized deployment on modern cloud infrastructure. Operates as a forward deployed engineer — embedding with teams, translating ambiguous requirements into working software, and owning delivery from architecture through production.

PROFESSIONAL EXPERIENCE

Forward Deployed Engineer, **Mentalyc Inc** Mar 2026 – Present

AI-native clinical documentation platform for mental-health practitioners

- Build and ship AI-native documentation workflows end-to-end — backend transcription and processing pipelines, LLM-driven structured note generation (SOAP / DAP / BIRP), and the frontend surfaces practitioners use daily — in a HIPAA-conscious environment.
- Build retrieval-augmented generation (RAG) pipelines with LlamaIndex and LangChain over a pgvector vector database, grounding LLM outputs in relevant clinical context for accurate, reliable documentation.
- Engineer REST API integrations and connectors between internal services and healthcare documentation systems, orchestrating multi-step, reliable, production-grade workflows.
- Design data models and serverless backend logic, and develop internal tooling for onboarding, execution reliability, and scale, deploying to cloud infrastructure.
- Embed directly with customers to run technical discovery and turn real-world clinical workflows into deployed, working software.

Software Engineer, **Viact.ai** Dec 2024 – Mar 2026

Enterprise AI platform for workplace safety (Computer Vision, Edge AI, AIoT)

- Developed full-stack features for an enterprise AI platform — backend services and APIs for real-time safety monitoring and operational risk detection, plus frontend dashboards visualizing computer-vision and IoT data streams.
- Built and integrated data pipelines processing real-time streams from edge devices and computer-vision models; designed APIs and webhooks connecting edge processing, IoT integrations, and cloud services.
- Containerized services with Docker and deployed across cloud environments, contributing to system reliability and scalability for enterprise deployments.

SDE II, **DappRadar** Jul 2023 – Dec 2024

World's leading Web3 dApp discovery & analytics platform (1M+ users)

- Built and maintained backend services and APIs (Node.js / PHP) powering DappRadar's Web3 analytics platform — aggregating and indexing on-chain data across multiple blockchains to serve dApp, token, NFT, and DeFi insights to over a million users.
- Developed high-throughput data pipelines that ingest and normalize real-time blockchain data, exposing it through performant REST APIs and frontend dashboards.
- Worked across the stack on data accuracy, reliability, and scale for multi-chain analytics, integrating with smart contracts and on-chain data sources.

Application Developer, **Hakuna** Jan 2021 – Jul 2023

Global real-time live-streaming social platform (10M+ downloads)

- Developed full-stack and native iOS application features for a real-time live-streaming social platform serving a global audience — building backend, frontend, and native iOS (Swift, Xcode) functionality for live video, chat, and social interaction.
- Worked with WebRTC-based real-time communication to support low-latency HD live broadcasts and multi-guest video rooms across web and iOS.
- Built features across user engagement, in-app gifting and virtual currency, and content discovery; contributed to performance, reliability, and scale.

Executive Systems Engineer, **ET Media Labs** Mar 2020 – Nov 2020

Acquired by McKinsey

- Built and maintained systems and automation for multi-channel data acquisition and analytics across digital growth platforms.
- Developed reporting and analytics tooling integrating Google Analytics, Looker Studio, and platform APIs; automated data workflows and experimentation pipelines.

PERSONAL PROJECTS

ninjatest.app Next.js · Supabase · PostgreSQL

AI-Enabled Competitive Exam Prep Platform · Under development

- Building a full-stack, AI-enabled prep platform for the world's toughest competitive exams, featuring a real-time 1v1 ranked mode where students compete head-to-head with live matchmaking and synchronized game state over Supabase Realtime.
- Designed an ELO-based ranked matchmaking system and section-level scoring, with all authoritative game logic enforced server-side through PostgreSQL security-definer RPCs.
- Integrated AI-assisted mistake review for personalized feedback on wrong answers, and built the national leaderboard, auth, and data model on Supabase / PostgreSQL with a Next.js (App Router) frontend.

SKILLS

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

Frontend & Mobile: React.js, Next.js (App Router), Tailwind CSS, shadcn/ui, Framer Motion, Responsive UI, Native iOS Development (Swift, Xcode), Mobile App Development

Backend: Node.js, REST APIs, GraphQL, WebRTC, Webhooks, OAuth / Auth Flows, PostgreSQL, Supabase (Auth, RLS, Realtime, Edge Functions), Firebase

AI & Agentic: LLM Integration & Orchestration, LangChain, LangGraph, OpenAI APIs, Claude / Claude Code, Model Context Protocol (MCP), Prompt Engineering, Function Calling / Tool Use, Agentic Workflows, RAG, Embeddings, Vector Databases (pgvector, Pinecone), Evaluation & Guardrails, n8n

Web3 & Data: On-Chain Data Integration, Smart Contract Interaction, Multi-Chain Indexing, Data Modeling, ETL, Analytics Pipelines

DevOps & Infrastructure: Docker, Kubernetes, AWS, GCP, Vercel, CI/CD, Postman

EDUCATION

Executive Post Graduate Certificate in Generative AI & Agentic AI 2025

IIT Kharagpur

Bachelor of Computer Application (BCA) Jul 2016 – Aug 2019

Maulana Abul Kalam Azad University of Technology