

SNEHA PAL

Agartala, Tripura

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🌐 [LinkedIn](#)

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EDUCATION

ICFAI UNIVERSITY, Tripura

B.Tech - Computer Science and Engineering - CGPA: 8.8

2023 – 2027

Tripura

EXPERIENCE

Full-Stack Developer, KPI Monitoring Platform – Gov of Tripura

Jul 2025 – Jan 2026

Gram Samriddhi Portal

Remote

- Implemented multi-layer caching using Node.js in-memory cache and Nginx to reduce repeated database queries and improve performance of high-read public analytics.
- Configured production deployment with Nginx reverse proxy, TLS/HTTPS, security headers, and PM2 for Node.js process management.

Backend Developer Intern, National Informatics Centre

Jun 2025 – Aug 2025

Self-Help Group (SHG) Management System

Agartala, India

- Developed RESTful APIs for a Self-Help Group (SHG) Management System using NestJS, TypeScript, TypeORM, and PostgreSQL, implementing CRUD operations for SHGs, members, meetings, savings, loans, and repayments.
- Implemented JWT-based authentication and role-based authorization, with a structured relational database design for secure and reliable management of SHG organizational and financial data.

PROJECTS

Ignita – Event Aggregator & Analytics Platform | *NestJS, TypeScript, Docker, AWS (ECS Fargate, ALB, RDS, S3, CloudFront), PostgreSQL*

- Designed and provisioned AWS cloud infrastructure leveraging ECS Fargate, Application Load Balancer (ALB), Amazon ECR, and CloudWatch for container monitoring.
- Migrated production PostgreSQL database from Supabase to Amazon RDS, setting up zero-downtime TypeORM migrations and centralized key management with AWS Secrets Manager.
- Implemented private S3 bucket storage integrated with CloudFront CDN edge caching for low-latency delivery of user assets and event banners.
- Containerized NestJS services with multi-stage Docker builds, establishing zero-downtime deployment pipelines and health checks for AWS ALB target groups.

MyPrep – AI Voice Learning Companion Platform | *Next.js, TypeScript, Google Gemini, Supabase, Clerk, Vapi AI*

- Architected a multi-modal AI learning SaaS using Next.js (App Router), Google Gemini, and Vercel AI SDK with Zod schemas to deterministically generate personalized study roadmaps and 5-question interactive quizzes.
- Engineered low-latency, real-time voice mentorship rooms integrating Vapi Web SDK over WebSockets with Deepgram Nova-3 (Speech-to-Text) and ElevenLabs (Text-to-Speech) for technical interview preparation.
- Built serverless cloud infrastructure using Supabase PostgreSQL with Clerk JWT authentication for Row-Level Security (RLS) and implemented tier-based (Free/Pro) feature access control via Server Actions.

Grubbly – Food Delivery Platform | *React, Node.js, Express, MongoDB, Docker, AWS EC2, AWS S3, Terraform*

- Architected a multi-role food delivery platform supporting Customers, Kitchen Vendors, and Admins with dynamic inventory toggles, cart state management, and scoped revenue analytics.
- Engineered real-time delivery tracking by integrating Socket.io WebSockets with Leaflet.js maps and OpenStreetMap Nominatim reverse-geocoding to render live rider animations and pinned addresses.
- Integrated Razorpay payments, backed by AWS S3 and CloudFront CDN edge caching for low-latency media storage.
- Built a GitHub Actions CI/CD pipeline deploying multi-stage NGINX Docker containers to AWS EC2, automated with Terraform IaC and container /health probe checks for zero-downtime releases.

ACHIEVEMENTS & CERTIFICATIONS

- **PwC Advisory Launchpad** – Selected for and successfully completed the PwC AC India Launchpad Cloud Program, gaining exposure to cloud computing and problem-solving (Aug 2026).
- **AWS Cloud Quest: Cloud Practitioner** – Completed hands-on AWS training in EC2, IAM, VPC, Load Balancing, and Auto Scaling (Sep 2026).
- **Anthropic – Claude 101** – Completed foundational training in Claude, covering prompting and practical GenAI workflows (2026).
- **Top 12 – MeitY TIDE 2.0 Northeast Techathon** – Selected among the Top 12 teams in the Northeast Techathon organized by MeitY, IIM Calcutta, and Tripura IT Department (Aug 2025).

TECHNICAL SKILLS

Languages: Java, Python, JavaScript

Frameworks: React.js, Next.js, Node.js, Express.js, NestJS, Tailwind **Databases:** PostgreSQL, MongoDB, MySQL, Supabase

Cloud/DevOps: AWS (EC2, S3, IAM, RDS, VPC, ECS, EKS, Lambda, CloudFront, CloudWatch), Terraform, Docker, GitHub Actions, Nginx