

MEET MENDAPARA

Full-Stack Engineer · AI/ML Builder · Systems Architect · Founding Engineer

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PROFILE

Full-stack engineer and AI systems builder with a bias for speed, reliability, and zero-to-one delivery. Designed and shipped real-time platforms handling 100+ concurrent users, cut API latency by 20%, and built production-grade AI research tools - independently. Comfortable owning entire systems: architecture, backend, frontend, infra, and ML pipelines. Seeking founding engineer or early-stage roles where breadth of skill and speed of execution matter most.

TECHNICAL SKILLS

Languages: TypeScript · JavaScript · Python · C++ · Go · Java · SQL

Frontend: React · Next.js · Tailwind CSS · Redux · React Query · Framer Motion · ShadCN · WebRTC

Backend: Node.js · Express.js · Flask · FastAPI · Spring Boot · REST · GraphQL · Microservices

Real-Time: WebSockets · Socket.IO · Redis Pub/Sub · Firebase Realtime DB · Server-Sent Events

AI / ML: OpenAI API · Google Gemini · LangChain · Hugging Face · TensorFlow · PyTorch · Scikit-learn · SHAP · LSTMs · Transformers · RAG

Databases: PostgreSQL · MongoDB · Redis · MySQL · Supabase · Prisma ORM · Indexing & Query Optimization

Infra & DevOps: Docker · GitHub Actions · Vercel · AWS EC2 · CI/CD · Zero-Downtime Deployments

Security: JWT · OAuth 2.0 · AES-256 · Row-Level Security (Supabase) · Auth flows

Practices: System Design · Agile · Feature Flagging · Phased Rollouts · Monorepo · API Caching Strategies

EXPERIENCE

Software Developer Intern · Divine Connection (Startup)

Ahmedabad, India | Feb 2024 - Apr 2024

- Engineered real-time frontend-backend sync using Firebase WebSockets and REST APIs, supporting 100+ daily active users with zero reported downtime during the engagement.
- Built 8+ reusable React components with Framer Motion animations under a modular architecture, cutting component development time by 30% and establishing a scalable design system.
- Slashed API latency by 20% and boosted session duration by 15% via React Query caching strategies (stale-while-revalidate, request deduplication), directly improving user retention metrics.
- Delivered 3 key features ahead of sprint deadlines using Agile practices including feature flagging and phased rollouts - maintaining product stability while shipping fast.

Data Analysis Intern · Internship Studio

Remote | May 2024 - Jun 2024

- Built Python/Pandas analytics pipeline over retail sales data, surfacing regional trends that directly guided inventory reallocation and increased regional sales.
- Delivered automated visual dashboards and executive reports, replacing ad-hoc spreadsheets and enabling faster data-driven decisions across business units.

AI/ML Intern · Internship Studio

Remote | Jan 2024 - Feb 2024

- Built a face recognition system using PCA for dimensionality reduction and ANN for classification in Python, achieving reliable identification across the test set.
- Improved model accuracy through systematic preprocessing - normalization, feature extraction - and evaluated performance using confusion matrices to guide iterative tuning.

PROJECTS

CogNexa - Personality-Informed Cognitive Behavioural Modeling Framework

Lead Researcher & Engineer

- Designed a research-grade AI system integrating cognitive science, personality psychology (Big Five), LSTM/Temporal Fusion Transformers, and SHAP-based XAI into a closed-loop behavioural modeling pipeline.
- Implemented a four-phase architecture: real-time behavioural data capture (EMA), DSEM-based modeling, personality-tailored nudge delivery, and continuous model adaptation - enabling testable hypotheses for neuroscience research.
- Engineered a cognitive translation layer that converts ML feature attributions into plain-language psychological insights (e.g., delay risk explanations), bridging AI outputs and human understanding.

- ▶ Designed for clinical research use: V3 validation model, ADHD/burnout digital phenotyping, and an open science repository - positioning the system for publication and real-world behavioural intervention trials.

SwiftTrack - *Operational Logistics Intelligence Platform*

Individual Contributor

- ▶ Built a scalable real-time logistics platform supporting 100+ concurrent GPS-tracked users via Socket.IO pub/sub with WebSocket compression - cutting bandwidth by 25%.
- ▶ Implemented Supabase Row-Level Security for role-based dashboards (vendor/admin/customer), eliminating unauthorized access; designed and indexed PostgreSQL schema improving query performance by 40%.

SyncroSpace - *Full-Stack Collaboration & Comms Suite*

Lead System Engineer

- ▶ Built a full-stack MVP featuring WebRTC video (STUN/TURN fallback), AES-256 encrypted chat, Kanban boards, whiteboards, and surveys - solo, from concept to deployment.
- ▶ Architected scalable microservices with JWT auth, Redis-backed real-time presence (40% latency reduction), and optimized PostgreSQL for write-heavy workloads; shipped via CI/CD with zero-downtime rollbacks on Vercel.

SpikeMind - *AI Research Assistant for Computational Neuroscience*

Independent AI Researcher

- ▶ Built a full-stack AI research assistant with 25+ FastAPI endpoints, enabling intelligent ingestion, novelty/reproducibility scoring, and hypothesis generation from scientific papers using Gemini LLM integrations.
- ▶ Implemented contextual Q&A, research gap identification, and pattern discovery with Redis caching and Docker Compose for production-grade deployment.

Lakshya360 - *AI-Powered Career Guidance PWA - National Hackathon*

Lead System Engineer

- ▶ Designed and built an AI-driven career and education guidance platform for government deployment targeting underserved students, featuring a 24/7 AI counselor chatbot, personalized recommendations, and offline PWA access.
- ▶ Planned phased rollout strategy with analytics monitoring, feedback loops, and government-aligned data privacy - built for scale from day one.

Emo-Bot - *Theory of Mind Conversational AI Agent*

Independent AI Researcher

- ▶ Built a conversational agent with multi-dimensional emotion analysis (valence, arousal, discrete categories), Theory of Mind reasoning (beliefs, desires, intentions), and an XAI layer exposing confidence scores and dialogue strategies via FastAPI.

Expenseasy - *Fiscal Control & Compliance Engine - National Hackathon*

Lead System Engineer

- ▶ Developed a role-based expense management platform (admin/manager/employee) with NextAuth/JWT, end-to-end approval workflows, client-side Tesseract.js OCR for receipt extraction, and Prisma Accelerate-backed PostgreSQL on Vercel.

ChronoSync / LocalBeam / SnapToSheet - *Time Tools · LAN File Sharing · Invoice OCR* Individual Contributor

- ▶ ChronoSync: Global time-zone coordination app built with Next.js App Router, React Server Components, Luxon, ShadCN - deployed on Vercel with optimized production build.
- ▶ LocalBeam: LAN file-sharing with drag-and-drop, WebSocket progress, QR-code access, file previews, and optional password security - zero external dependencies.
- ▶ SnapToSheet: Vision-first invoice extractor using OpenRouter vision models + Tesseract.js OCR fallback, outputting 5-sheet Excel workbooks with GST breakdowns, audit trails, and accounting entries.

EDUCATION

B.Tech, Computer Science & Engineering · Indus University

Ahmedabad, India | 2022 – May 2026

- ▶ GPA: 8.5 / 10 | Coursework: DSA, DBMS, Computer Networks, OOP (C++), Software Engineering, NLP
- ▶ LeetCode: ~390 Medium + ~140 Hard solved | Contest Rating - 1,833 · Active in competitive programming and ML research

WHY FOUNDING ENGINEER

I have independently shipped a logistics platform, a collaboration suite, an AI research assistant, two national hackathon winners, and a publishable cognitive science framework - while maintaining an 8.5 GPA. I don't wait for specs: I identify the problem, architect the solution, and ship. I write backend, frontend, ML pipelines, infra, and CI/CD. I am at my best in zero-to-one environments where speed, reliability, and ownership define success.