Tarun Basavaraju

Software Engineer · Full-stack & Applied AI

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SUMMARY

Final-year CSE student who ships production apps for a paying client and LLM systems measured by rigorous evaluation.

EXPERIENCE

Freelance Software Engineer · **EuroKids Preschool** · ek-desk.vercel.app — Aug 2026 - Present

Next.js · TypeScript · Supabase · Vercel

- Designed and launched EK Desk solo, replacing handwritten registers and Excel with a fee-management platform now running at **2 branches** for **300+ students**.
- Engineered expiring, tokenized payment links sent over WhatsApp that open directly in UPI apps, with a verification queue, approval workflow and audit log tracing every rupee.
- Automated dues calculations and balance tracking, saving staff **2-4 hours** per billing cycle; added one-click overdue lists plus daycare re-enrollment, a front-desk request that trimmed data entry.
- Secured all personal and financial records with default-deny PostgreSQL Row Level Security, and verified transaction logic with **61 test suites** (Vitest, database integration, Playwright E2E).

Product Associate Intern · **Docxster** — Jul 2024

Document AI startup

- Reduced dashboard load time from **5s to 2s (60% faster)** by caching frequently requested values.
- Enhanced database schemas with new data types and revised the privacy policy for GDPR compliance.
- Prepared **1,000+ annotated bills and invoices** to train the company's extraction model.

PROJECTS

ThirdEye · third-eye-capstone.vercel.app — React · FastAPI · Ollama · ChromaDB

- Built and owned the verdict engine (router, evidence gate, risk pooling), cutting false alarms from **72.2% to 45.9%** at **89.1%** recall across 2,142 smart contracts.
- Created a local Solidity vulnerability scanner with 3 teammates, sending each file through 8 specialist LLM roles across 3 model families at **$0 per scan**.
- Analyzed how false-positive rates climb from **12.2% to 90.1%** as routing broadens, replicating the trend on a held-out seed; manuscript in preparation.

ADA · github.com/umarahmed10/genai_batch_12 — Python · FAISS · Ollama · Streamlit

- Developed an adaptive RAG assistant for research literature with 2 classmates; it classifies queries, retrieves over MiniLM embeddings and self-critiques its answers.
- Implemented an LLM-as-judge scoring harness on a 100-question benchmark; against a naive baseline, ADA lifted faithfulness from **63% to 84%** and its correctness score by **35%**. Co-authored an IEEE-format paper.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Java, C++, C, SQL
Frontend: React, Next.js, Tailwind CSS, Streamlit
Backend: Node.js, FastAPI, Supabase, REST APIs, Zod
Databases: PostgreSQL (RLS, migrations), FAISS, ChromaDB
AI/ML: RAG, LLM-as-judge evaluation, prompt engineering, embeddings, Ollama
Testing & DevOps: Vitest, Playwright, Docker, Git, Linux, Vercel
Core CS: DSA, OOP, DBMS, Operating Systems, Computer Networks
Familiar: Spring Boot, AWS, Kafka, Spark

EDUCATION

B.Tech, Computer Science & Engineering · **PES University, EC Campus** — 2023 - 2027

Class 12 (PCMC) · **Delhi Public School, Bangalore North**

LEADERSHIP & ACHIEVEMENTS

Trustee, The Celestial Foundation (registered NGO) — Feb 2023 - Present

- Directed planning, procurement and logistics for **6+ community projects** reaching **1,800+ people**, including a 3-day Daan Utsav that donated 100+ kg of rations to 2 orphanages.

Top 10, Override'23 Hackathon — 2023 · GDSC, PES University