Sreephaneesha Kanugovi

Bengaluru, India | +91 7259549529 | sreephaneesha2005@gmail.com
linkedin.com/in/sreephaneesh-kanugovi | github.com/phaneesh29 | sreephaneesh.vercel.app

Summary

Computer Science and Engineering (AI & ML) undergraduate at PES University specializing in distributed RAG pipelines, autonomous multi-agent swarms, and scalable real-time systems. Experienced in architecting production-grade full-stack applications with TypeScript, Python, BullMQ/Redis queues, and vector databases, complemented by formal research in LLM watermarking and synthetic text detection.

Education

PES University — Bengaluru, India
Bachelor of Technology in Computer Science and Engineering (AI & ML); CGPA: 7.71/10 — *Sept. 2023 – July 2027*

Narayana PU College — Bengaluru, India
II PUC (Class XII); Percentage: 81% — *Aug. 2023*

Research Experience

PESU Intelligent Labs (PESU PI) — Bengaluru, India
Research Intern – ZeroTrace | GitHub — *June 2024 – July 2024*

- Researched watermarking and synthetic text detection techniques to identify LLM-generated text and mitigate misuse.
- Benchmarked statistical detection and green-red token partitioning methods across open-weight LLMs, analyzing entropy and false-positive rates.
- Engineered automated Python evaluation suites simulating paraphrasing and perturbation attacks to assess watermark robustness.
- Earned a Certificate of Completion recognizing core contributions to AI traceability and text provenance evaluation.

Technical Projects

NotebookLM | GitHub | *Next.js 16, React 19, Express 5, BullMQ, Redis, Qdrant, Gemini, Minio* — March 2026

- Architected a distributed RAG knowledge workspace handling asynchronous document ingestion and parsing via BullMQ and Redis.
- Implemented dense semantic vector search with Qdrant and Minio S3-compatible storage for sub-second retrieval across large corpora.
- Integrated Gemini API with context caching and source citation mapping to generate hallucination-resistant, verified responses.

Connectling | GitHub | *TypeScript, Next.js, Express.js, PostgreSQL, Drizzle ORM, BetterAuth, Zod* — Sept. 2026

- Engineered a real-time collaboration backend managing dynamic room states, host privilege handoffs, and active heartbeats.
- Built end-to-end type-safe REST APIs and relational schemas using Drizzle ORM and PostgreSQL with Zod runtime validation.
- Implemented secure session-based authentication using BetterAuth and role-based access control (RBAC) for private rooms.

DEV.NEWS (DevBits) | GitHub | *OpenAI Agent SDK, Vercel AI SDK, Next.js, TypeScript* — May 2026

- Designed an autonomous multi-agent swarm coordinating 5 specialized agents to automate tech news aggregation and editorial synthesis.
- Employed OpenAI Agent SDK and Vercel AI SDK with cloud LLMs to scrape, deduplicate, and fact-check technical dispatches in parallel.
- Developed a reactive command deck with real-time agent state telemetry, pipeline diagnostics, and editorial review flows.

Email AI Pro | GitHub | *Next.js, TypeScript, Upstash QStash, Vercel Serverless, Gemini API* — April 2026

- Engineered an event-driven serverless email agent using Vercel Serverless Functions decoupled by Upstash QStash message queues.
- Processed inbound email webhooks asynchronously, removing persistent server overhead and guaranteeing zero dropped events.
- Automated contextual response generation and tone adaptation using Gemini API, streaming drafted replies directly to mail clients.

Technical Skills

Languages: JavaScript, TypeScript, Python, C, SQL (PostgreSQL, MySQL)
Frontend: React.js, Next.js (App Router), Tailwind CSS v4, Three.js, DaisyUI, HTML5, CSS3
Backend: Node.js, Express.js, Hono, Socket.IO, WebRTC, BullMQ, Redis, Multer, Svix
Databases & Storage: PostgreSQL, MongoDB, Qdrant (Vector DB), Minio
Tools & DevOps: Docker, Linux, Git, GitHub Actions, Drizzle ORM, Clerk Auth, BetterAuth, Zod, Nodemailer
AI/ML & Systems: OpenAI Agent SDK, Vercel AI SDK, Gemini API, RAG, AI Agents, Model Context Protocol (MCP), LangChain