Krishna Koushik Kasarla

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Education

Gokaraju Rangaraju Institute of Engineering and Technology — Hyderabad, India
B.Tech in Computer Science and Engineering — Expected May 2029

CGPA: 8.44/10

Technical Skills

Languages: Python, TypeScript, JavaScript, SQL

Backend & Web: FastAPI, Node.js, Next.js, React, REST APIs

AI/ML: PyTorch, scikit-learn, NumPy, LangGraph, LLM APIs

Cloud & Tools: GCP, AWS Bedrock, Docker, Linux, Git, Tree-sitter, PostgreSQL, Firebase, Supabase

Projects

visionOS – AI-Native Spatial Workspace | GitHub | Live Demo — 2026
Next.js, TypeScript, Gemini, tldraw, Web Workers, Kiwi.js, IndexedDB

- Built a local-first AI canvas that turns sketches and natural-language requests into interactive apps, documents, and presentations.
- Developed a Web Worker layout engine using R-tree indexing and Cassowary constraints, solving 100-node alignment problems in **0.55 ms median** across 100 benchmark runs.
- Implemented sandboxed app execution with user-approved network permissions and IndexedDB workspace recovery, backed by **454 passing automated tests**.

NovaSecurity – AI Vulnerability Analysis Engine | GitHub — 2026
Python, FastAPI, Tree-sitter, NetworkX, LangGraph, Amazon Nova, AWS Bedrock

- Built a Python static-analysis engine using Tree-sitter and NetworkX to trace potential source-to-sink vulnerabilities across functions, covering **29 untrusted input patterns and 19 execution sinks**.
- Developed an **8-stage LangGraph workflow** for vulnerability scanning and AI red/blue-team review, with isolated Git workspaces for generating reviewable patch proposals.

HealthGrid – Synthetic Clinical Data Platform | GitHub | Demo — 2026
Python, FastAPI, scikit-learn, NumPy, React, TypeScript

- Built a CPU-only FastAPI backend using causal models to generate synthetic patient cohorts and longitudinal health records, producing **5,000 patients and 61K+ visits** in a local benchmark.
- Evaluated statistical fidelity, ML utility, and privacy risk against holdout data and a Gaussian-copula baseline, achieving **0.581 C2ST AUC** and a **+0.029 TSTR–TRTR AUROC gap** on the demo dataset.

Experience

Freelance Software Developer | **Fiverr** — 2020 – Present
Self-Employed via Fiverr — Remote, Project-Based

- Delivered **26 paid client orders** spanning Linux VPS/cloud provisioning, application hosting and deployments, and website development using WordPress and modern web frameworks.
- Managed end-to-end server configuration, deployment, and troubleshooting for client environments, including custom Minecraft servers; earned a **4.9/5 rating across 21 public reviews**.

Achievements

- **2nd Place, Healthcare Domain – Software Hackathon Convergence 2K26:** Built HealthGrid with a four-member team during a 24-hour hackathon at VNRVJIET, Hyderabad.