Gopikrishna Gopakumaran

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Education

Indian Institute of Information Technology (IIIT) - Kottayam August 2024 – Present
BTech Computer Science and Engineering with Specialization in Cybersecurity CGPA: 8.4

Sri Chaitanya Techno School (CBSE) April 2023
Grade 12 91%

Experience

Software Development Engineer-1 Intern, Six30Labs June – Aug 2026
OnSite, Bengaluru

- Diagnosed and resolved critical defects in a production FastAPI/Python AI backend (silent orchestration key mismatch) by tracing execution across the Classifier, DB Engine, RAG Engine, and Response Synthesizer layers
- Configured a multi-dialect Text-to-SQL engine (Vanna AI + GPT-4o) with schema-aware context injection and ChromaDB-based RAG training, eliminating LLM hallucinations in enum resolution and query structure across MySQL, PostgreSQL, and MSSQL
- Designed a pre-release QA test plan and mapped the system's feedback-loop architecture (Redis caching, gap-analysis logging, quota enforcement, RLHF approval queue), flagging data-poisoning risk in automated pipelines

Software Development Engineer Intern, Autonomic Solutions LLC Oct 2026 – Present
Remote, Virginia, USA

- Diagnosing and fixing failures in the multi-cloud provisioning automation of the Autonomic Computing Platform (ACP), tracing issues across the backend orchestration layer, Terraform execution (init, plan, apply), and provider responses for AWS, Azure, and GCP
- Debugging Terraform configurations on Azure against a live test environment, isolating the errors that broke automated deployment
- Validating infrastructure changes end to end by running ACP locally and executing provisioning flows before committing fixes to the shared repo

Projects

VoidShare, Anonymous E2EE Distributed Ephemeral File Transfer | TypeScript, Fastify, React, SQLite [GitHub]

- Built client-side AES-256-GCM chunked encryption with HKDF-derived keys and per-chunk AAD binding, so the server never sees the encryption key and chunk reorder or truncation attacks fail (Vitest tamper tests)
- Designed a 3-node distributed chunk store with consistent hashing, 2-replica writes, failover reads, and heartbeat-driven re-replication after node loss
- Enforced single-use downloads under concurrency with compare-and-swap state transitions and leases, plus a TTL sweeper and orphan reconciler that purge expired chunks from all nodes

Web Vulnerability Scanner (webv) | Python, BeautifulSoup, Nmap, Nikto [GitHub]

- Built a CLI web vulnerability scanner with fast, normal, and deep modes
- Implemented a BeautifulSoup crawler for endpoint and form discovery, feeding custom XSS and SQL injection payloads into the discovered endpoints and forms
- Orchestrated Nmap and Nikto alongside the custom checks and consolidated results into HTML reports with severity ratings and remediation guidance

Gymbel, Fitness and Nutrition Tracker | FastAPI, Python, Firebase, React Native [Website]

- Developed the REST backend for a college-wide fitness app (team of 4), covering the exercise catalog, workout session logging, and previous-session history endpoints
- Modeled nutrition tracking around Foods and Food Logs tables, with fuzzy food search
- Implemented authentication with per-user data ownership and an admin verification flow for user-submitted foods

Skills

Languages: C/C++, Python, JavaScript/TypeScript, SQL, Bash
Frontend: React, Next.js
Backend & AI: FastAPI, REST APIs, Vanna AI, ChromaDB, Scikit-learn
Databases: MySQL, PostgreSQL, Redis
Tools: Git/GitHub, Linux, Unix Shell, Docker