

Sanidhya Kumar

+91 7838885068 | sanidhyakum2005@gmail.com | linkedin.com/in/sanidhya-kumar-420891291 | github.com/SpaceCypher

EDUCATION

PES University

Bachelor of Technology in Computer Science

- GPA: 8.12 | Dean's List – 4x recipient

Bengaluru, Karnataka

August 2023 – August 2027

EXPERIENCE

Software Engineering Intern

June 2025 – July 2025

Sopra Steria

Remote

- Designed an internal API discovery platform reducing service duplication by **30–50%** across engineering teams.
- Integrated semantic search with OpenAI embeddings, improving query relevance **40%** over keyword search.
- Built RESTful APIs in Node.js/MongoDB with role-based access control, autogenerated client code, and in-browser testing.
- Shipped real-time analytics dashboard for monitoring and user management, reducing integration time **35%**.

ACHIEVEMENTS

5th place at Atos SRIJAN Hackathon 2025 (600+ teams) for building an Agentic Inventory Arbitrage System.

PROJECTS

Adaptive Recursive RAG for Multi-Hop QA | [GitHub](#) | *PyTorch, HuggingFace, FAISS, DeBERTa, Phi-3*

Apr 2026

- Designed an adaptive retrieval controller with NLI-based claim verification (DeBERTa cross-encoder) to dynamically decide whether to stop, refine, or retrieve more evidence - eliminating wasted LLM calls on easy questions.
- Benchmarked Standard, Recursive, and Adaptive RAG on 75 HotpotQA questions; Adaptive achieved **68% EM** and **100% faithfulness** at only **1.16 avg LLM calls** vs. 3.00 for fixed-depth recursion.
- Reduced hallucination rate to **0%** (vs. 5.3% Standard, 4.0% Recursive) via grounding-gated generation using Phi-3 Mini 4-bit quantized on a Kaggle T4 GPU.

Multi-Agent Misinformation Detection | [GitHub](#) | *Vertex AI, Gemini 2.0, GCP, React*

Sep 2025

- Built a dual-pipeline platform: fast single-agent claim verifier (3–5s) and a three-agent analyzer (Classifier → Evidence → Explanation) for multimodal text, image, video, and URL content.
- Integrated Gemini 2.0 Flash multimodal API for speech extraction, visual manipulation detection, and false-context identification in videos – achieving **85%+ detection accuracy** on climate and health misinformation.
- Deployed on GCP (Cloud Functions, Cloud Workflows, Vertex AI) with Google Custom Search for live evidence retrieval; real-time verifier handles **50+ req/min** at **95%+ accuracy**.

Argus-PG – PostgreSQL Index Validation Engine | [GitHub](#) | *Python, PostgreSQL, Docker*

Feb 2026

- Built a sandbox-first validation system that detects slow PostgreSQL queries and proves index optimizations before production using isolated Docker containers, ensuring zero production write risk.
- Achieved **82×–145× verified query speedups** via deterministic A/B testing with `pg_stat_statements`; integrated Gemini-assisted hypothesis generation gated strictly by empirical sandbox results.

TECHNICAL SKILLS & CERTIFICATIONS

Certifications: Machine Learning Crash Course, The Web Developer Bootcamp (Colt Steele)

ML & AI: PyTorch, HuggingFace Transformers, sentence-transformers, FAISS, LangChain, CrewAI, Vertex AI, Gemini API, OpenAI API, scikit-learn, pandas, NumPy

Languages: Python, JavaScript, TypeScript, C, C++

Web & Backend: React, Express.js, Node.js, RESTful APIs, Tailwind CSS

Cloud & DevOps: GCP (Cloud Functions, Vertex AI, Cloud Workflows), Docker, AWS, Linux/UNIX

Databases & Tools: PostgreSQL, MongoDB, Git, Jupyter Notebook