Swayam Gupta

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Education

Year	Degree	Institution	Score
2024	B.Tech, MSE	Indian Institute of Technology, Kanpur	6.51/10.0
2019	CBSE – XII	Pt. Deen Dayal Vidyalaya, Kanpur (CBSE)	89%
2017	CBSE – X	Pt. Deen Dayal Vidyalaya, Kanpur (CBSE)	9.4/10.0

Achievements

- 2nd place in ixigo hackweek'25, built GenAI travel product — *2025*
- Won ixigo Premio Award for top contributor Engineers — *2025*
- Silver Medal in PS by ISRO hosted by Inter IIT Tech Meet — *2022*
- Secured **5402nd** rank among 1Lac+ Participants in **Google Hash Code 2021** — *2021*

Work Experience

ixigo — *Aug'24 - present*
Software Engineering 2 - AI Products
Tara

- Led **AI SDK** architecture from scratch, designing multi-platform node package with **event-driven** integration system supporting seamless **developer experience** across different **frameworks**
- Implemented **multi agent** orchestration featuring dynamic tool registration, **conditional triggers, multi-modal responses**, **proactive** event triggers and detailed **LLM observability**
- Architected **event driven** streaming platform with SSE, universal API integration, parallel function execution, and **Redis/ZEP** based **long & short term memory context management**
- Built **real time voice** pipeline integrating multiple AI providers with custom FFT/PCM audio analysis, client-side **VAD models** like **silero V5 and WebRTC for multiple data channels**

Internal Efficiency & Voice Bots

- Developed **Voice Bots** infrastructure supporting **real time conversational AI Agents** with **websocket connections**, handling concurrent calls across **twilio & plivo** telephony systems
- Worked on **post call** analytics pipeline with **LLM** powered conversation summarization, **sentiment analysis**, NPS extraction
- Created enterprise scale **MCP server ecosystem** integrating GitLab, Jira, Grafana etc APIs with secure **OAuth 2.0**
- Eg:Reviewing the MR by **AI based** on the **Repo context** and then resolving them through **MCP clients** or IDEs like **Cursor**

Overlayy AI — *Apr'24 - Aug'24*
Fouding Engineer

- Built scalable production-ready LLM backend pipeline from scratch using advanced RAG techniques, improving search latency while managing complete startup technology infrastructure
- Managed comprehensive AWS DevOps infrastructure for multiple microservices, implementing CI/CD automation and integrating AI-enhanced Plausible analytics using Elixir/Phoenix framework
- Developed secure real-time WebSocket messaging system with robust API authorization, architecting custom analytics solution using ClickHouse data warehouse for optimal performance

Previous Internship Experience

Fischer Jordan (offered PPO) — *Jun'23 - Feb'24*
Built React.js client management portal with Redux state management, RESTful APIs, and WebSocket real-time features

Llama Mindfulness — *Apr'23-Jun'23*
Developed Node.js backend with Slack Bolt integration, configured Moodle LMS plugins, created JavaScript admin portal

Vaticinari Solutions — *Jul'23-Sep'23*
Performed cybersecurity threat analysis using Neo4j graph databases, Bloodhound AD mapping, and CVE data processing

C3i Hub, IIT Kanpur — *Jul'21-Jul'22*
Integrated Drupal CMS with PHP Composer, built React.js Threatmap frontend using React.js and Express APIs

Key Projects

Reel2Trip — *March'25*
⦿ ixigo Hackweek'25 - *Live on Production*

- Built **FastAPI** backend integrating **Google Gemini 2.0** and OpenAI GPT-4 for video-to-itinerary conversion system
- Developed Instagram DM method using Facebook **Graph API** with real-time **webhook** processing, currently live production
- Implemented intelligent caching layer reducing AI processing costs by 70% through reel deduplication and optimization
- Created context aware chat system with **ZEP memory** management enabling iterative itinerary editing and personalization

Auth based MCP framework — *Jul'25 - present*
⦿ Self Open Source Project

- Architected a production ready **OAuth 2.0** framework for **MCP servers**, reducing implementation complexity by **90%** for DX
- Built enterprise authentication system with PKCE flow, AES-256 encryption, automated token refresh, and multi-provider support
- Published open-source npm package with comprehensive documentation, TypeScript definitions, and developer-friendly APIs following modular architecture
- Led e2e development of first-to-market OAuth solution for MCP ecosystem, establishing production standards and compatibility

ISRO Web Based X-RAY Burst Automation — *Feb'22 - Apr'22*
⦿ Inter IIT Tech Meet 10.0

- Developed **web automated system** for identifying **solar** bursts, utilising the **ReactJS framework** with data segregation features
- Organised curve data by saving specific details in **react hooks** in **JSON** to ensure smooth management and API calls to the server
- Led end-to-end **product** documentation and orchestrated the development of a user journey and research, ensuring project success
- Won a **Silver Medal** in the **mid-prep event**, with IIT Kanpur's contingent securing the **2nd position** in the **overall Meet**

Journal Scrapper for Data Mining — *Jul'22 - Dec'22*
Supervised By- Proff. Shikhar Krishan Jha

- **Automated** system for fetching **.ris/.bib** files, extracting author details programmatically, and optimizing data retrieval processes
- Proficiently conducted **NER (Named Entity Recognition)** to extract author entities and **DOI URLs** from scholarly articles
- Used Scopus **Cited By API** to implement citation counts of **input journals**, enhancing our tool's functionality & data accuracy
- Seamlessly connected **Flask app** and frontend was established through **HTTP** or other **REST-based API** calls via backend

Positions of Responsibility

Head Web & App, Techkriti'23 — *Jul'22 - May'23*

- Analyzed and optimized a large repository of MERN Stack product's bundle size, configuring **Webpack for asset compression**
- Managed **350K+** monthly views, **30K+** daily, maintained 15K+ user database, and achieved **30%** YOY growth for 10+ corporates

Relevant Courses

Industrial Internet of Thing	Probability & Statistics
Introduction to ML	Linear Algebra and ODEs

Skills

Languages: Js, Ts, Python, Elixir, C++
Frameworks: NodeJs, FastAPI, ReactJs, NextJS, Django, Flask
Services/Libraries: SQLite, Mongodb, PostgreSQL, Docker, git, GitLab, numpy, pandas, selenium, chromaDB, beautifulSoup, EC2, RDS, nginx, Neo4j, Weaviate, LLM Solutions, Langfuse, Langchain