

SURAJ KUMAR GUPTA

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

Full-Stack Engineer (MERN / Next.js) with hands-on experience shipping production-grade web applications and AI-powered systems. Proficient in scalable REST API design, RAG pipeline construction, and LLM integration — including a from-scratch GPT-2 training workflow. Strong DSA foundations; seeking backend or full-stack roles where performance and intelligent features intersect.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), Python, C++

Frontend: React.js, Next.js, Tailwind CSS, Three.js

Backend: Node.js, Express.js, REST APIs

Database: MongoDB

AI / ML: LLMs, RAG Pipelines, Prompt Engineering, GPT-2 (custom training), OpenAI API

Tools: Git, GitHub, Postman, VS Code

PROJECTS

Multi-Vendor E-Commerce Platform

gocart-drab.vercel.app

Next.js · Node.js · Express.js · MongoDB · LLM APIs

- Architected a multi-tenant platform with JWT-based RBAC across admin, vendor, and customer roles — clean separation of business logic across 3 actor types.
- Delivered SSR product pages via Next.js, reducing initial load time ~40% vs. a CSR-only baseline.
- Designed and documented 15+ RESTful API endpoints covering products, orders, and user management with structured validation and error handling.
- Integrated LLM-powered semantic search to parse natural-language queries, improving search relevance over keyword-only matching.

AI-Powered Resume Builder

mern-stack-project-1-sxrm.onrender.com

React.js · Node.js · Tailwind CSS · LLM APIs

- Built a full-stack resume builder with real-time live preview, multi-step structured input, and modular component architecture.
- Engineered an LLM content-enhancement pipeline that rewrites user input into ATS-optimized bullet points with improved keyword density.
- Implemented in-browser PDF export with pixel-accurate layout, producing print-ready resumes without external tooling.
- Reduced live-preview re-render overhead ~30% using React.js memoization and lazy loading.

AI & RESEARCH WORK

- Built an end-to-end RAG pipeline — document ingestion, BPE chunking, embedding, and vector-similarity retrieval — serving context-aware LLM responses with sub-second latency.
- Implemented GPT-2 from scratch: custom tokenizer, multi-head attention, positional encoding, training loop, and autoregressive text generation — no high-level ML frameworks.
- Developed interactive 3D visualizations with Three.js integrated into React.js, leveraging WebGL for performance-critical rendering.

EDUCATION

B.Tech — Computer Science & Engineering, KIIT Bhubaneswar

Expected: May 2027

Coursework: Data Structures & Algorithms · Operating Systems · DBMS · Computer Networks · OOP

ACHIEVEMENTS

- Solved 300+ DSA problems on LeetCode and Codeforces, focusing on graphs, DP, and greedy algorithms.
- Trained a GPT-2 transformer from scratch (tokenizer → attention → generation) entirely in Python without high-level framework abstractions.
- Shipped 5+ full-stack and AI-integrated projects independently to production on Vercel and Render.