RAJEEV NANDAN DAMARLA

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Performance-driven Computer Science & Engineering candidate (CGPA: 9.27/10) specializing in Software Engineering, Full-Stack Product Development, and High-Performance AI Integrations. Experienced in engineering latency-critical backends, designing robust REST/WebSocket APIs, and building scalable full-stack applications. Proven success optimizing machine learning serving pipelines (22% latency reduction at IIT Kanpur) and processing high-throughput document ingestion. Expert in Python, C/C++, Java, SQL, Node.js, and modern React/Next.js architectures.

EDUCATION

GITAM University – School of Technology *2023 – Present*
B.Tech in Computer Science & Engineering – CGPA: 9.27/10 ***(Expected Graduation: May 2027)***
Core CS & Math Coursework: Design & Analysis of Algorithms, Data Structures, Operating Systems, Database Management Systems (DBMS), Computer Networks, Automata, Compiler Design, Cryptography & Network Security, Linear Algebra, Probability & Statistics

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java, JavaScript (ES6+), SQL (MySQL, SQLite), HTML5/CSS3
Backend & Web Engineering: Node.js, Express, FastAPI, RESTful APIs, WebSockets, React.js, Next.js, Redux, Tailwind CSS, WebGL/Three.js, GSAP
DevOps & Data Tools: Git/GitHub, Docker, Linux, CI/CD, Postman, Vercel, Netlify, PyTorch, FAISS (Vector Database), TensorFlow, Pandas

EXPERIENCE

Independent Full-Stack & Software Developer *September 2025 – Present*
Freelance / Self-Employed – Custom Web & SaaS Solutions
- Engineered premium corporate web applications and automated candidate intake portals, deploying seamlessly on Vercel
- Designed robust backend REST APIs using FastAPI and Node.js microservices to connect secure frontend modules with databases
- Developed multi-step registration forms with real-time state validation, storing structured applicant profiles in custom databases
- Designed live bento-grid administrative dashboards equipped with real-time candidate search, custom fuzzy matching, and multi-parameter filtering

Generative AI Systems & Research Intern Certificate *June 2025 – August 2025*
Indian Institute of Technology, Kanpur – Deep Learning & Vision Research Group
- Optimized machine learning serving pipelines in PyTorch, achieving a 22% reduction in inference latency through batching and mixed precision
- Refined diffusion model training and sampling steps, achieving a 15% reduction in FID score (greatly improving generation fidelity)
- Built empirical diagnostic dashboards in React to visually compare model latency and throughput across 3 distinct LLM architectures
- Processed, parsed, and validated high-dimensional image datasets to ensure end-to-end model pipeline reproducibility

SOFTWARE ENGINEERING PROJECTS

Insight GPT (Scalable Document Search & AI RAG System) </> Project *Oct 2025 – Dec 2025*
- Designed a semantic document-search web app integrating a custom vector database (FAISS) with a frontend chat interface
- Built high-throughput data ingestion pipelines handling 500+ high-volume PDFs (80K+ pages), achieving 0.82 top-1 retrieval accuracy
- Slashed query response latency by 35% through caching layers and optimized embedding indexes
- Utilized Python to clean, pre-process, and extract high-quality embedding vectors from text

Candidate Intake & Automated Recruiter Dashboard </> Project *May 2026*
- Built a responsive corporate portal for candidate registration featuring a multi-step form and drag-and-drop file upload
- Designed a custom recruiter dashboard displaying live statistics, instant fuzzy search algorithms, and multi-parameter filter controls
- Integrated clean local storage and mock database states to ensure robust, state-persistent frontend operations on Vercel

Interactive Web3D Engine & Portfolio Website </> Project *Oct 2025 – Dec 2025*
- Developed a premium, production-ready editorial portfolio website using Next.js 15, TypeScript, and Tailwind CSS
- Implemented high-performance scroll-scrubbing hero animations utilizing ImageBitmap video frame extraction (90 frames)
- Designed an interactive 3D particle background in WebGL using Three.js with fluid, mouse-movement-responsive physics
- Engineered smooth scrolling behaviors and spring-eased cursor tracking elements using GSAP ScrollTrigger and Framer Motion

RESEARCH CONTRIBUTIONS & OPEN SOURCE

- **Open-Source Component Engineering:** Actively build and contribute reusable UI components using Tailwind CSS and Framer Motion.
- **Technical Documentation:** Write thorough README guides and API documentations to support developer onboarding and code reproducibility.

CERTIFICATIONS

Certifications available at: `https://github.com/Rajeev91691/Certifications`