

SANKALP SAHU

CHENNAI, INDIA

CONTACT

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SKILLS

- Languages:** Python, Java, JavaScript
- Backend:** FastAPI, Flask, Firebase
- Generative AI & LLMs:** LangChain, RAG, AI Agents (ReAct), LLMs (Mistral, Llama), SLMs, Hugging Face Transformers, Prompt Engineering
- Machine Learning:** NLP, BERTScore, Scikit-learn, PyTorch (basics), NumPy
- Databases & Tools:** Firebase Firestore, Git, Docker (basics), Gradio, Jupyter Notebook, Cursor, Windsurf
- Other:** REST APIs, Data Structures, Algorithms, OOP, VS Code, IntelliJ

PROFESSIONAL EXPERIENCE

App Development Intern – SkillVertex Jan 2024 – Mar 2024

- Built and deployed mobile and web applications focused on real-world use cases.
- Integrated Firebase Authentication and Database services.
- Applied UI/UX principles and responsive design practices.



PROFILE

Aspiring Software Engineer with experience in backend development, application design, and data-driven systems. Strong in Java, Python, OOP, and Data Structures, with hands-on experience building modular, scalable applications. Passionate about building reliable software solutions and learning enterprise-grade engineering practices.



PROJECT EXPERIENCE

- AI Code Refactor & Optimization(LLM-Powered)** (LINK) (Local LLM, Qwen 2.5 14B, Groq, Docker, Pytorch) DEC 25 - MAR 26
 - Built and deployed RefactorAI, an AI-powered code refactoring assistant that analyzes uploaded Python files, detects anti-patterns/security issues, and generates optimized, PEP8-compliant code with type hints.
 - Integrated LLMs (Qwen2.5-Coder via Ollama locally or Llama-3.1 via Groq) with LiteLLM + Instructor for structured output, combined with static analysis tools (Ruff, Bandit) and AST parsing for per-block explanations and 0-100 quality scoring.
- Legal Contract Analyzer (AI / NLP)** (LINK) (Gradio, Transformers, word2Vector, Scikit-Learn) JAN- MAY 2025
 - Built an AI-powered system to summarize legal contracts, extract key clauses, and generate questions automatically.
 - Implemented answer evaluation using BERTScore and auto-correction via text-generation models.
 - Designed a Gradio-based web interface for legal students.
 - Processed 50+ sample contracts with 87% BERTScore accuracy
- High-Concurrency Enterprise Banking Engine** (LINK) (Maven, Executors, ReentrantLock, ConcurrentHashMap) DEC 2024
 - Architected a thread-safe backend processing 1,000+ concurrent transactions with zero race conditions using ReentrantLock.
 - Implemented deadlock prevention via resource ordering and fairness policies to eliminate thread starvation.



EDUCATION

B.Tech in Computer Science Engineering Sept 2022 - Present
SRM Institute of Science and Technology, Chennai