

Jaspreet Singh Nahal

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

SUMMARY

B.Tech CSE (AI) student with ML internship experience and **300+ LeetCode problems**. Built AI chatbots, trading systems, and automation tools using Python, React, FastAPI, and LangChain with focus on scalable architecture and performance optimization.

EXPERIENCE

Machine Learning Intern <i>Expedien eSolutions</i>	Aug 2025 – Oct 2025 Noida, India
Algorithmic Trading Developer <i>Freelance</i>	Nov 2024 – Dec 2024 Remote

Machine Learning Intern | *Expedien eSolutions* | Aug 2025 – Oct 2025 | Noida, India

- Built RAG-based legal chatbot using LangChain, FAISS, and Hugging Face models with RetrievalQA pipeline
- Optimized document retrieval achieving <2s response time on 10K+ document corpus with Streamlit UI

Algorithmic Trading Developer | *Freelance* | Nov 2024 – Dec 2024 | Remote

- Developed automated trading system with SMA crossover strategy using Flask API and PostgreSQL
- Reduced trade execution latency by 30% through async processing and optimized data handling

PROJECTS

Context-Grounded GPT-RAG System <i>GPT, PyTorch, Transformers, FAISS, NLP, RAG</i>	February 2026
<ul style="list-style-type: none">Built and pretrained a 200M-parameter GPT-style transformer from scratch in PyTorch with causal self-attention, custom initialization, and GPT-2 tokenization on 10B FineWeb-Edu and Wikipedia tokens and Wikipedia data.Implemented Retrieval-Augmented Generation using Sentence Transformers and FAISS, achieving sub-200ms retrieval latency and reduced hallucinations via confidence-based gating.Developed a hybrid GPT/RAG chat system with instruction fine-tuning, selective loss masking, top-k sampling, and repetition control for reliable multi-turn conversations.	
Resume Skill Extractor <i>Python, FastAPI, NLP, React</i>	Jun 2025
<ul style="list-style-type: none">Engineered AI-powered skill extraction tool using spaCy, TF-IDF, and regex achieving 85%+ accuracyBuilt REST API processing resume files in <2s with containerized deployment via GitHub Actions	
AI Chatbot with NER <i>React.js, Python, Flask, MongoDB</i>	Sep 2024
<ul style="list-style-type: none">Developed NLP chatbot with 92% intent recognition accuracy handling 1,000+ user sessionsIntegrated Named Entity Recognition and real-time Flask API with <1s response time	

EDUCATION

Dr. A.P.J. Abdul Kalam Technical University <i>B.Tech Computer Science Engineering</i>	Uttar Pradesh 2023 – 2027
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TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript
ML & LLM Systems: PyTorch, Hugging Face Transformers, SentenceTransformers, FAISS, LangChain, Retrieval-Augmented Generation (RAG)
Data & Training: NumPy, Pandas, scikit-learn, Spark, gradient-based optimization, large-scale pretraining
Backend & Tooling: FastAPI, Flask, REST APIs, PostgreSQL, MongoDB, Git, Docker, GitHub Actions, Streamlit

HACKATHONS & CERTIFICATIONS

Hackathons: IBM AI Hackathon (2025), Google Solutions Challenge (2025), GUVI Hackathon (2025)
Certifications: Google – Prompt Design in Vertex AI & Responsible AI, IBM – Accelerating Deep Learning with GPUs, BCG X (Forage) – GenAI Financial Chatbot Simulation