# **Arun Singh Thakur**

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### **SUMMARY**

Dynamic AI Engineer with expertise in machine learning, natural language processing, and generative AI. Proficient in Python, TensorFlow, and Keras, with hands-on experience in fine-tuning large language models, developing multimodal RAG systems, and building autonomous AI agents. Seeking to drive innovation in AI Engineer, Gen AI Engineer, or ML Engineer roles by leveraging technical skills and international experience in India and the UAE.

### **SKILLS**

- Programming Languages: Python
- Machine Learning Frameworks: TensorFlow, Keras, Scikit-learn
- Generative AI & Agent Frameworks: LangChain, LangGraph, AutoGen, CrewAI
- Databases: MongoDB, PostgreSQL
- Data Visualization: Matplotlib, Seaborn
- Cloud Platforms & Other Tools: NumPy, Pandas, Git, FastAPI, AWS, Azure, Docker

### **WORK EXPERIENCE**

Braiyt MENA
Al Engineer
Dubai,UAE
Nov 24-Present

- Developed a Agentic AI chatbot that analyzes high-frequency camera data, allowing users to interact with operational insights in their own language without technical expertise, enabling faster decision-making across multi-client environments, including a major Dubai-based gym.
- Built autonomous inventory agents to monitor stock levels and trigger reorder workflows, resulting in a 25% reduction in inventory costs through automated procurement strategies.
- Designed and launched Agent Hub, a centralized platform hosting multiple AI agents for document Q&A, trend-aware marketing, and business intelligence; adopted by clients including a government agency.
- Engineered an Al-powered chatbot for a law enforcement agency enable real-time incident analysis via automated data summarization, insight extraction, visual reporting, and question answering.
- Developed an aspect-based text summarization system for extracting actionable insights from unstructured data, enhancing operational decision making.
- Built an autonomous RFP response writer that analyzes RFP documents, suggests optimal response templates, and generates draft responses with minimal human input significantly accelerating bid preparation workflows.

## **Fixity Technologies**

Al Engineer

Bangalore,Ind Aug 24-Oct24

• Engineered an agentic assignment generator using prompt-tuned Claude 3 Sonnet and GPT-40 for autonomous question generation and intelligent evaluation, reducing manual workload by 30%.

- Developed an adaptive question generation system with iterative refinement,
   leveraging multi-model AI interactions for enhanced accuracy.
- Created an intelligent educational content creation pipeline with automated scoring and feedback loops, processing up to 1,000 questions per hour.

Genpact Bangalore,Ind

Data science intern

Jan 24-June24

- Fine-tuned a large language model using LORA and QLORA, achieving a 20% improvement in performance for client-specific tasks.
- Developed an LLM evaluator for a RAG pipeline, enabling customization of retrievers and vector databases, improving context retrieval accuracy by 15%.
- Built a multimodal RAG system incorporating tables, text, and images, integrated with a re-ranker for enhanced context retrieval.
- Performed exploratory data analysis (EDA) and fine-tuned BERT models for aspectbased sentiment analysis, improving model accuracy by 10%.

### **EDUCATION**

NIIT University , Rajasthan,Ind
B.tech , Computer Science 2020-2024

# POSITION OF RESPONSIBILITY

# Google Developer Student Club - NIIT University

Technical Lead

Feb 2023 - Jan 2024

• Artificial Intelligence Lead

Sep 2022 - Feb 2023

### **ACTIVITIES**

# Centre for Innovation Incubation & Entrepreneurship (CIIE)

• Runner up at pitch preneur

# **Hult Prize NIIT University**

• Presented our idea of smart parking solutions