PREMKUMAR KORA

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SUMMARY

Generative AI/LLM Engineer with 6+ years of hands-on experience autonomously exploring, prototyping, and delivering functional AI LLM applications. Specialist in end-to-end LLM application design, **Multi-Agent Orchestration** (LangGraph), and **RAG system development**. Proven expertise in fine-tuning LLMs/SLMs for domain-specific use(estimate rules to fine-tune the model), applying MLOps for scalable production deployment, and translating requirements into AI-enabled solutions. AWS-certified with strong presentation skills translating ambiguous requirements and presenting complex AI concepts and value to both technical and non-technical stakeholders.

KEY SKILLS

- Generative AI & Agentic Frameworks : Enterprise-grade generative and agentic AI systems , Crew.ai , Auto-Gen , multi-agent orchestration , RAG (Retrieval-Augmented Generation) , Vector Databases , autonomous workflows.
- LLMs & Frameworks – LLMs, Fine-tuning, & Experimentation : OpenAI SDK , Hugging Face , MCP (Model Context Protocol) , fine-tuning (LLMs/SLMs) , prompt & contextual engineering , transformers , LLMOps.
- Programming & AI Engineering – Python, java (Sun Certified), TensorFlow, PyTorch, Cursor.ai, Google AntiGravity, vibe coding, scalable ML pipelines, cloud integration.
- Data Science & Modeling – Artificial Intelligence, Machine Learning, Deep Learning, predictive & prescriptive analytics, NLP, computer vision, federated learning, data anonymization.
- Statistical modeling (regression, hypothesis testing, clustering, propensity modelling, survival analysis).
- MLOps & Data Engineering – End-to-end pipelines, CI/CD for ML, monitoring, model deployment, continuous improvement at scale.
- Strategic AI Leadership – AI roadmapping, digital transformation, innovation management, cross-functional leadership, stakeholder engagement.
- Vendor compliance reviews, data governance, regulatory alignment.
- Cloud & Big Data - AWS (certified), exposure to Azure ML.

SELECTED ACHIEVEMENTS

- Engineered an Enterprise GenAI Platform using Multi-Agent Orchestration and Model Context Protocol (MCP) for inter-agent communication, unifying 52 reporting systems into a single dashboard; this resulted in 85% faster reporting and USD 340K annual savings while serving 180+ technical and non-technical stakeholders.
- Autonomous Claims Processing – Developed and deployed an Agentic AI claims processing platform on AWS, leveraging Amazon Bedrock models (Claude, Titan, Llama) to automate 80% of claims approvals on a USD 1.8M monthly volume, resulting in a reduced cycle time (5.2 to 1.1 days) and $185K in annual savings while ensuring regulatory compliance(Reference Architecture available at: github.com/premkumarkora/agentic-healthcare-claims-audit).
- Engineered an LLM-powered Retrieval-Augmented Generation (RAG) application with secure context embedding to eliminate 100% manual data capture from complex insurance policy documents ; this system generated one-page summaries and functioned as a Q&A tool for adjusters, resulting in USD 1.0M annual cost avoidance.(Reference Architecture available at: github.com/premkumarkora/secure-enterprise-rag-framework).
- Fine-tuned a Llama 7B SLM to build a domain-specific LLM for automated claim approvals, successfully moving the core logic to a production environment after a 6-month beta.
- Drove enterprise-wide cost efficiency and IT architectural alignment by leading Open-Source Modernization initiatives. This involved the technical hands-on replacement of proprietary systems with scalable open-source technologies, resulting in a 63% cost reduction while ensuring strict compliance standards.
- AWS Certified AI Practitioner: Credential ID fc06c7cc6a504546860a3daff36eee82
- AWS Certified AI Practitioner Early Adopter Amazon Web Services (AWS)

WORK EXPERIENCE

Principal Data Scientist | Kora Consultants | Feb 2023-Present | Client: Anubavam Technologies

- Designed and launched an end-to-end GenAI/LLM application on AWS for the SaaS claims platform, architecting the solution for high-volume, automated claim approvals.
- Mentored a team of data scientists in developing production-ready ML/AI solutions, fostering innovation and knowledge sharing.
- Collaborated effectively with business, technical, and non-technical stakeholders to translate ambiguous requirements into structured, AI-enabled solutions , and presented the solution outcomes clearly and convincingly without alienating technical nuance or losing executive focus.
- Developed prescriptive AI solutions, including a recommendation system, to translate ambiguous business requirements into optimized claim allocation workflows.
- Applied advanced statistical and deep learning models (e.g., NLP) to build predictive models for churn prediction and customer segmentation, supporting critical business workflows.
- Led the fine-tuning of SLMs (Small Language Models) for domain-specific tasks, successfully integrating proprietary knowledge and compliance into the model for automated claim approvals.
- Maintained strict data protection and regulatory alignment for all AI systems, acting as a crucial bridge between technical development and compliance stakeholders. approvals.

QUALIFICATIONS & CERTIFICATIONS

- Advanced Professional Programming with Master Data Science Indian Institute of Technology, Madras – 2022(Curriculum included advanced statistics, probability, and machine learning algorithms.)
- Master Data Science Program GUVI, Chennai, India - 2022
- Applied Project Management Boston University, Corporate Education Centre, Boston, USA - 2006
- Project Management Professional. Project Management Institute, USA - 2005
- Master of Business Administration. Providence College, Providence, RI 02918, USA - 2003
- Bachelor of Engineering in Computer Science & Engineering, University of Madras, India - 1992

PREVIOUS EXPERIENCE

- Data Scientist, Kora Consultants | Client: Innovative Software Technologies, India | Feb 2019-Feb 2023
- Director Hotel Rishi Gardens, Tada, India | Jan 2012-Dec 2018
- Director NaBa Green Energy Pvt. Ltd., Chennai, India | Feb 2008-Jan 2012
- Project Manager Sunlife Financial, Wellesley Hills, MA, USA | Feb 2001-Mar 2007
- Project Manager SRM Systems and Software, Chennai, Singapore, USA | Mar 1999-Feb 2001
- Assistant Manager Container Corporation of India. Chennai, India | Aug 1996-Mar 1999
- Probationary Officer Export Credit Guarantee Corporation of India, India | May 1995-Aug 1996
- Programmer Real Time Software, Chennai, India | April 1993-May 1995

INNOVATION & THOUGHT LEADERSHIP

- Book (2024) Artificial Intelligence: For the Decision Makers
- Book (2025) Artificial Intelligence for Doctors: A Practical Guide to AI in Healthcare ()
- Book (2025) Machine Learning with Python: Building Smart Systems for the Real World ()
- Patent (2024): AI-based medical transcription and prescription system
- Patent (2024): Prescriptive AI solution using wearables for chronic illness monitoring
- Articles: Medium – @consultkora