Shubham Ringne

Data Science|Generative AI|Business Analysis|Leadership

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Professional Summary

Experienced AI Specialist with a strong background in predictive modeling, machine learning, and generative AI. Proficient in designing, developing, and deploying advanced AI solutions that drive innovation and business transformation. Demonstrated ability to lead cross-functional teams, manage complex AI projects, and communicate effectively with stakeholders to deliver impactful, data-driven strategies. Expertise in leveraging cutting-edge AI technologies, including agentic AI and autonomous systems, to extract actionable insights from diverse data sources and implement prescriptive strategies for project success. Having a total work experience of 9+ years.

Education:

B. Tech Computer Engineering
National Institute of Technology, Surat
07/2012 - 06/2016

Masters (M.S.), Data Science
Liverpool John Moores University, UK
06/2019 – 06/2021 (Instructor Led)

Industries:

- Telecom
- Manufacturing
- BFSI
- Infrastructure & Construction
- E-commerce

Skills and Competencies

- Predictive & Prescriptive Modelling
- Machine Learning
- Generative AI
- Agent Frameworks
- Leadership
- Prompt Engineering
- Graph DB
- Data Engineering
- Computer Vision
- Text Analytics- NLP
- Project Management
- BI & Reporting
- Knowledge graph
- Mathematical Optimizations

Technical Skills

- Python & R
- SciKit Learn
- GCP – Vertex AI, Gemini
- AWS Bedrock
- Open source LLM
- RDBMS & NoSQL
- Graph RAG
- MLOps
- Azure ML
- Neo4j
- Py Spark
- Model Deployment
- Docker

Experience

Data Science Senior Specialist - 07/2021 to Present
NTT DATA Information Processing Services Pvt. Ltd., India (Remote)

- Architected and implemented Retrieval-Augmented Generation (RAG) and Agentic AI systems using GCP and Azure frameworks.
- Designed and led development of agentic AI frameworks, enabling autonomous decision-making capabilities in AI agents and improving operational efficiency.
- Partnered with product, data science, and engineering teams to convert business needs into robust, scalable AI systems.
- Served as project lead, overseeing client engagement, team coordination, and on-time delivery of AI initiatives.

Senior Data Scientist - 09/2019 to 07/2021
Tech Mahindra Ltd., Hyderabad

- Led the development and implementation of ML, BI and analytical models, collaborating closely with software developers and machine learning engineers. Ensured timely governance, resulting in actionable business improvements.
- Assessed business processes, identified optimization opportunities, and delivered data-driven solutions; presented insights to stakeholders to guide strategic decisions and process improvements.

Data Scientist - 06/2016 to 09/2019
Quadratic Insights Pvt. Ltd., Hyderabad

- Framed analytics solutions for clients' problems, directly engaging with clients to present insights and identify improvement areas, and designed multiple corporate trainings to enhance employee efficiency in data analytics.
- Managed data-preparation involving the pre-processing, cleansing, and integrity verification of data used for analysis.

Professional Projects

MCP- Multi-Agent Orchestration System for Retail Enhancement

- Developed a robust multi-agent system framework to enhance the shopping experience for users.
- Utilized MCP and A2A protocols to efficiently coordinate communication between agents and tools.
- Incorporated Graph RAG with Neo4j as Graph DB to enable context-aware retrieval and knowledge management for personalized agent recommendations.
- Implemented LiteLLM proxy server as a load balancer, optimizing LLM calls across models including Claude and Azure OpenAI models.
- Integrated advanced architectural components such as memory, state, and session management using Google Vertex AI memory bank service to improve system functionality. Used
- Enhanced system tracing and observability by leveraging Langfuse, which was also utilized for effective prompt management.

Agentic AI- SmartAgent solution Hub

- Leading the development of a PaaS system to automate the creation of agent-based AI projects, reducing implementation time from a month to under a week. Successfully led a team of 5 in the design and implementation, resulting in an 80% reduction in project setup time.
- Architected the PAS to support user-friendly interfaces for designing and managing agentic AI solutions in Google Agent Development Kit(ADK).
- Implemented features for to create AI agents, define tasks, and set up workflows tailored to specific use cases.
- Integrated multiple agent frameworks to offer flexibility in deploying various AI agents.
- Successfully reduced project setup and implementation time by over 80%, with positive feedback for significantly enhancing productivity.

GenAI Medical Record Research Assistant

- Build end to end pipeline for the RAG application to process a leading US Insurance Companies document(which include Patient's Visit records, discharge summary) and enabling a chat bot like UI to answer specific health claim-related questions, enhancing operational efficiency and client satisfaction.
- Engineered a graph-based retrieval layer using Neo4j, modeling medical entities and relationships to enable complex querying, improved context aggregation, and explainable, data-driven insights in claim adjudication.
- Led the Development a multi modal GenAI assistant that allows adjustors interact with medical documents to glean key information needed to recommend claim for approval.

Agentic AI- Automotive Insurance Agent

- Developed an multi agent autonomous automotive insurance agent framework to decide on claim approvals based on claim details, damage photos, and policy specifics, using a multi-agent framework in CrewAI and Autogen.
- Integrated Azure computer vision API to analyze vehicle damage photos, estimating damage and validating claims
- Coordinated interactions between damage assessment, policy evaluation, and decision-making agents, incorporating reinforcement learning for improved accuracy.

Predictive Maintenance- Smart Manufacturing

- Created data migration pipeline integrating a delta lake medallion architecture for data storage and pre-processing for analytical use cases. Worked on Predictive maintenance and Anomaly detection use case in Manufacturing. Extracted actionable insights from IOT sensors data by leveraging Azure databricks for data transformation and preprocessing and report generation through PowerBI.

Professional Projects

Intelligent ITSM- Automating ITSM with ML

- Built and deployed multiple Machine learning use-cases involving ITSM datasets such as Ticket Categorization, Volume Prediction, Ticket Summarization, Extracting relevant keywords from an incident based on the ticket type. Deployed the solution using Databricks as scheduled jobs as per the requirements.

B2C Recommendation Engine – Ecommerce

- Provided an efficient product recommendation solution on a scalable platform for an E-Commerce giant, based on click stream and product catalogue data consisting over 10 million products.

NLP- Email classification and tagging for a banking company

- Preprocessing and classification of customer emails into respective categories depending upon the content in the mail and automatically redirect the complaints received to the concerned departments.
- Used NTLK and DTM libraries to preprocess emails and extract the most relevant words. Developed a Naive Bayes Classifier which tags those emails with the appropriate company department.
  Also built a descriptive Power BI dashboard on complaints received per department and the resolution stats.

Product Recommendation Engine(B2B)

- Using Random Forest Classifier, built a product recommendation solution for one of the biggest retail manufacturers in India. By using the product catalogue and the invoice transactional history, for a given store on a given date or within a timeline, predicted recommendations of Items and their quantity that should be purchased from the distributor/warehouse.

Road Route Optimization - Sales Force Automation

- Built a scalable route optimization application for a retail distribution giant, enabling efficient management of salesforce routes to minimize travel distance and maximize sales.
- Designed and implemented mathematical optimization algorithms using dynamic programming, resulting in a 28% reduction in the average number of delivery personnel required per store.

Interaction Analytics for multiple Telecom Giants

- Identify trends from chat/ IM conversations to enable topic and intent classification and understand sentiment categorized by keywords, topics, and tags.
- Built exhaustive Power BI dashboard to showcase NPS analysis on the survey dataset, to determine the key promotors and detractors, targeting individuals to improve their service, finding various insights based on products and services to educate the low performing service agents.
- Building a model with various attributes like customer behavior, AHT, Issue Type, Region, skillset, frequency of occurrence, customer age group etc., to predict the repeat calls, which in turn improves the overall customer experience.

Thesis & Certifications

Thesis:
A ML Approach on Medical Drug Recommendation- Analyzing Patient Reviews and Sentiment on Drugs.

Certification:
Structuring Machine Learning Projects, DeepLearning.AI (Credential ID : K6JGTBUS3NKH)
Generative AI with Large Language Models, Coursera
Multi AI Agent Systems with crewAI , DeepLearning.AI