



SUMMARY

Principal Engineer with over **10 years of Exp** delivering impactful AI/ML solutions, **8+ years in leadership roles as a Lead Data Scientist and Data Science Manager.** Expertise spans **ML, DL, NLP, Gen-AI, LLMs, Computer Vision, Statistical Analysis, Forecasting, and the end-to-end ML lifecycle** from data strategy to deployment. Skilled in **system design, model optimization, CI/CD pipelines, and developing scalable, reusable, and secure solutions.** Proven track record of leading cross-functional teams across **Supply Chain, Logistics, Healthcare, Finance, Retail and Manufacturing** domains. Successfully led and mentored teams of **5+ members**, ML, data engineers, developers, and QA, to deliver a customer retention platform. **Oversaw project lifecycle** from requirements gathering and solution design to deploy and monitoring resulting in a **scalable, maintainable that delivered measurable business impact.**

PROFESSIONAL EXPERIENCE

Data Scientist / Generative AI Lead

Nov 2023 - Present

Tech Mahindra

Bengaluru, IN

Mile Separation Claims GenAI Chatbot

- Implemented GenAI using Large Language Models (LLMs) to enhance decision-making processes.
- Developed a chatbot to assist supervisors in making informed decisions by providing detailed responses about Paycode based on OneNote documents and agreements for specific pools or routes in the railroad industry.
- Created contextual embedding vectors to improve the chatbot's understanding and retrieval of relevant information, ensuring accurate and context-aware responses.
- Achieved significant reduction in response times and increased overall efficiency in managing mile separation claims, leading to more strategic and informed decision-making.
- Focused on reducing mistakes and minimizing manual approval of claims, thereby increasing profitability for customers and stakeholders.

Healthcare and Medical Leveraging LLM and Knowledge Base for Logistics & Supply Chain

- Successfully integrated LLM for NLU and data analysis, specifically tuned for healthcare logistics complexities.
- Implemented RAG strategies to enhance the retrieval of pertinent healthcare logistics data.
- Reduced response times and increased overall efficiency in managing healthcare supply chain disruptions.

Medicaid Category Recommendation Search Engine: Healthcare drug

- Developed healthcare drug recommendation system using Transformer encoder-decoder.
- Conducted data pre-processing and feature engineering for large-scale healthcare datasets.
- Fine-tuned Transformer model and improved model performance and Achieved positive user feedback for accuracy.
- Actively participated in knowledge-sharing with team and stayed updated on emerging technologies.

Senior Data Scientist

Jun 2022 - Oct 2023

Autodesk

Bengaluru, IN

Trend Analysis Forecast: Sale Forecasting

- worked on Exploratory Data Analysis (EDA) to understand historical sales trends and patterns.
- Utilized Neural Prophet model for time-series forecasting, accommodating for various factors influencing sales trends.
- Implemented Serverless Python framework to enable scalable and cost-efficient computing.
- Configured and deployed the solution on AWS, integrating services such as S3 for data storage and Lambda for serverless computation, Deployed Docker Image on ECR service.

Indirect Tax Forecast: Indirect Tax Forecasting, Tax Dashboard

- Developed forecasting models using advanced analytics to predict future indirect tax liabilities.
- Implemented time-series data to optimize input for the Neural Prophet model, enhancing forecasting accuracy.
- Collaborated with tax experts and financial stakeholders and incorporate changes into the forecasting model.
- Implemented a dynamic Tax Dashboard, facilitating real-time monitoring , decision-making for financial stakeholders.
- Integrated the Prophet model using the Serverless Framework for AWS Lambda functions.
- Configured AWS services, including S3 for data storage, Lambda for serverless compute, and API Gateway for endpoint exposure, Deployed Docker Image on ECR service.

Transaction & Entertainment Anomaly Detection: Fraud Transaction Anomaly Flag Normal Detection

- Developed and implemented machine learning models for the detection of fraudulent transactions and abnormal entertainment activities.
- Created multiple roles and approaches to detecting of Anomaly for fraud transaction.
- Utilized statistical methods & predictive modeling to enhance the accuracy & anomaly detection efficiency algorithms.
- Implemented a dynamic anomaly detection system that adapts to new patterns and continuously evolves to counter emerging threats.
- Successfully deployed the Anomaly Detection system, contributing to a 86% reduction in security incidents.

KEY SKILLS

- Machine/Deep Learning Methodologies
- Optimization Techniques
- Text Mining
- Data Mining & Analytics
- Predictive & Statistical Modelling
- Sentiment Analysis
- Anomaly Detection
- Data Analysis
- Data Visualization
- Project Delivery
- Predictive Modelling & Analytics
- Programming
- Process Improvement
- OpenAI
- Team Coordination & Leadership
- Debugging
- MLOPS
- LLM
- RAG
- Fine-Tune
- Model Context Protocol
- Llama
- AI Agent
- Forecasting
- AWS
- Azure
- GCP
- Transformer

TECHNICAL SKILLS

- Languages:** Python, Java, Android ,SQL, C, C++, Kotlin, JavaScript.
Database: MySQL, MongoDB, PostgreSQL
Big Data: Hadoop, Snowflake, Hive

Statistics: central tendency Measures, Hypothesis Test, Normal Distribution.

Machine Learning: Linear/Logistic

Regression, DT, Random Forest,

XGBoost, Kmeans, Isolation Forest.

Time Series: Arima, SARima, Prophet

Deep Learning: CNN, RNN, LSTM

NLP: Transformer, LLM, Gen AI, RAG,

LangChain, VectorDatabase, LLaMa,

Mode Context Protocol(MCP), AI

Agent, BERT, Word2Vec, Agentic AI

Vector Database: FAISS, Chroma

Cloud Computing: AWS, Azure,

Firebase(GCP), AWS-Sagemaker,

DataBricks, AzureOpenAI

Libraries: Pandas, Numpy, PySpark,

Scikit-learn, Tensorflow, Pytorch,

Serverless, Flask, OCR, OpenAI.

Tools: Tableau, Power BI, Kibana, ELK,

MLFlow, Bamboo, CDSW, RabbitMQ.

Devops: Docker, Kubernetes, CI-CD

Pipeline, Git, Gitlab

AWS: IAM, S3, Lambda, Glue, EC2, ECR,

ECS, ECK, Batch, CloudWatch, API

Gateway, CloudFormation, Sagemaker

Azure: Blob/DataLake, AKS, ACR, ARM,

KONG, Cognitive Service, Document

Intelligence, Search AI, OpenAI.

ACHIEVEMENT & HACKATHON

- Conferred with the Stakeholder's **Best Award in May-2017** for exemplary performance in successfully completing and navigating a complex project, ensuring a seamless and delivery.

- Honoured with the **Team Leadership and Knowledge Transfer Award in December 2021** for exemplary leadership in managing and guiding a high-performing team.

- Banking ML Analytics:** 43th Rank
- LTFS Fin Hack:** 57th Rank
- Mobility Analytics:** 61th Rank
- HR Analytics:** 82th Rank
- Computer Vision:** 94th Rank

CERTIFICATIONS

- AWS Cloud Certificate Jan 2022
- ML PGD IIIT-Bangalore Sep-2019
- AI DataMites Certification 2016
- Android Certification June 2014

EDUCATION

MS in Data Science, Liverpool John

Moore University, UK 2019 - 2021

PG Diploma in Machine Learning & AI, IIIT-Bangalore, 2019 - 2020

B.tech (ISE), Siddaganga Institute of Technology, Tumkur, 2011 - 2015

Sale Search Chatbot: Bot Conversation with Humans.

- Designed and implemented the chatbot's conversational flow, ensuring a seamless and intuitive interaction for users.
- Leveraged NLP techniques to enhance the chatbot's understanding of user queries and provide accurate responses.
- Integrated ML algorithms to continuously improve the chatbot's ability to understand and adapt to user preferences.
- Collaborated with the different team to identify common user queries and optimize the chatbot's responses.
- Enhanced the chatbot's capabilities to handle complex customers queries, resulting in increased customer engagement

AI Engg 2

Apr 2020 - Jun 2022

Bangalore, IN

IQVIA

Examination of Chest X-ray / CT-Scan COVID-19 Detection: Image Processing, Transfer Learning

- Prepossessed and curated a diverse dataset of Chest X-ray and CT-Scan images for model training and validation.
- Implemented transfer learning using pre-trained models to enhance the model's ability to detect COVID-19 patterns.
- Developed and fine-tuned a CNN model, optimizing hyper-parameters for maximum accuracy and sensitivity.
- Directed **model development**, validation, testing, and **implementation** of analytical products and applications
- Achieved a classification accuracy of 94.52 in detecting COVID-19 from medical images.

ETMF-PD-AI: Extract Document Details & Upload Document.

- Implementation of AI algorithms for accurate extraction of relevant document details.
- Development of a user-friendly interface for document upload, ensuring a seamless and intuitive experience.
- Coordinated with cross-functional teams to integrate the solution with existing document management systems.
- Implemented Docker containers to encapsulate micro-services, ensuring consistency across different environments.
- Utilized Kubernetes for container orchestration, enabling automatic scaling & efficient management of micro-services.
- Daily Checked and managed different virtual environments to accommodate diverse micro-services requirements.

GXP-TMS: Translation Management Service

- Worked on RabbitMQ for asynchronous communication between micro-services, enhancing system responsiveness.
- Established a robust version control system using GitLab, enhancing collaboration and code management.
- Worked on backend services using Python, incorporating AI algorithms for enhanced translation quality and efficiency.
- Successfully deployed GXP-TMS on Kubernetes, resulting in improved scalability and resource utilization.
- Designed and maintained the MySQL database for storing and retrieving translation data.

Data Science Consultant

Jul 2019 - Apr 2020

Bangalore, IN

Gyansys Infotech

Legal Contract : Extract Text and Predict Discount Money.

- Extracting multiple legal documents using OCR technique used Python Programming.
- Worked on Regular Expression to find pattern of Legal documents text.
- Worked on Data Cleaning, Data Pre-processing, Visualization used PandasProfile.
- Implemented Model Training, Model Compile, Model Evaluation used XGBoost.
- Worked Application & Model Deployment on Azure used Docker Images.

Data Science Engineering

Feb 2018 - Jun 2019

Bangalore, IN

High Peak Software Pvt Ltd

LendStash: Predict Book and Not Book

- Implemented Recognize Text, Detecting different types of Faces, Scan Barcodes.
- Detect the book first page using OCR technique to fetch all text then storing text in string variables.
- Worked on Keras, TensorFlow, Image Augmentation, Image Resize Convolution, Relu Layer, Max-pooling Layer.
- Implemented Model building using book images dataset to perform image classification.
- Saving model using TFLite and keeping model on Google Firebase cloud used Python Programming.

Machine Learning Firebase Kit: App for Predicting All Types of Machine Learning on Mobile Device.

- Implemented Recognize Text, Detecting different types of Faces, Scan Barcodes.
- Worked on Label Images to fetch all dimension values, Firebase Vision Text.
- Added Text Recognition Processor, File, Detect Image, Firebase Vision Image used Kotlin & Java Programming.

Software Engineering

Nov 2015 - Feb 2018

Udupi, India

Robosoft Technologies Pvt Ltd

Wand: It is an enterprise application. It is a login based application designed for Manager and Worker.

- Worked on Login, Signup, Logout User Interface and Customised layout using different styles.
- Implemented Google Firebase for Database stores, Rest API used Java Programming, XML.
- Followed MVP design pattern and added unit testing for applicsation validation.