

MADHUSUDAN KUMAR

Senior Data Scientist

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max12525k

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SKILLS

Python

Plotly

Pytest

Scikit-learn

Pandas

Tensorflow

PyTorch

Large Language Model

LangChain

FastAPI

MongoDB

VectorDB

MYSQL/PostgreSQL

Git

Pulumi

MLFlow

AWS

Linux

Docker

PROFESSIONAL EXPERIENCE

Senior Data Scientist

SecureThings.ai

Sep 2022 - Ongoing

Mumbai India

- Developed spacy pipeline to extract cybersecurity 50+ labels and 20+ relationships from 2000000+ semi-structured texts to generate knowledge graph with 70+ accuracy.
- Designed and developed LLM pipeline using langchain to improve labels and relationship extraction by 15% and reducing the time taken by 90%.
- Collaborated with stakeholders to design and implement data pipeline, machine learning pipeline and machine learning operation on aws cloud using IaC(Pulumi).

Senior Data Scientist

Tata Consultancy Services

Feb 2022 - Sep 2022

Mumbai, India

- Led the development of web based ML exploration tool for 40% faster development of ML usecases for telecom.
- Developed ML based solution for 10+ usecase from scratch for telecom fault and performance management leading to decrease in 15% reduction in events and enable close loop automation for 25% event.
- Collaborated with clients to reduce the delivery time of mutually agreed milestone by 5%.

Data Scientist

- Proposed, designed & built Python package for integration of 24+ ML use cases across 4+ applications, reducing integration time by 60%.
- Improved predictive maintenance by one day-ahead forecasting of faults and reducing the operation cost by 18%.(POC).
- Reduced number of tickets by 6% via automating the identification of alarm's cluster with root alarm (POC).
- Improved network performance by deploying anomaly detection algorithm on azure cloud for network loss and latency, detecting half an hour prior to performance degradation (IP filing in process).
- Automated and optimised monthly forecasting of claims paid and premium collected, reducing average Mape by 10%.

EDUCATION

M.Tech+B.Tech in Mechanical Engineering

Indian Institute of Technology, Bombay

Jul 2013 - Nov 2018

Mumbai, India

- Successfully designed process to predict failure time of machines on the network to minimize the operation down time.
- Proposed and implemented standard template using owl ontology to digitally store properties of machine component from different vendors.
- Successfully headed official video channel, leading a team of 6 conveners, creating 60+ videos and covering 35+ events, with nearly 2 million views
- Researched on pattern formation and created meaningful visualization as an Intern in Non Linear Dynamics at Chiba University, Japan.