

MADHUSUDAN KUMAR

Senior Data Scientist

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PROFESSIONAL EXPERIENCE

Senior Data Scientist

SecureThings.ai

📅 Sep 2022 - Ongoing

📍 Mumbai India

Automotive Cybersecurity

- Utilize Deep learning techniques to extract cybersecurity labels, entities and relationships to create knowledge graph.
- Developed and maintain APIs on AWS cloud to facilitate security applications.

NLP

NER

FastAPI

MongoDB

AWS

Senior Data Scientist

Tata Consultancy Services

📅 Feb 2022 - Sep 2022

📍 Mumbai, India

Telecommunication

- Led a team of 6 in designing a federated ML architecture for 10+ fault and performance management usecase across 5000+ sites, in partnership with data engineer, domain expert and solution architect for swift response.
- Headed client calls to ensure model transparency and explainability while gathering requirements for ML solutions

Federated ML

Client Engagement

DL

Data Scientist

Tata Consultancy Services

📅 Apr 2019 - Nov 2021

📍 Mumbai, India

Telecommunication

- Proposed, designed & built Python package for integration of 24+ ML use cases across 4+ applications, reducing integration time by 60%
- Optimise network management by building usecases for predictive maintenance of network, reduced fault ticket generation and detection of network performance loss (IP filing in progress)

Text mining

Event Forecasting

Anomaly detection

TDD

Insurance

- Automated and optimised monthly forecasting of claims paid and premium collected, reducing average Mape by 10%

Timeseries Forecasting

Data Analysis

Reporting

ARIMA

Research Internship

Chiba University

📅 May 2016 - Jun 2016

📍 Chiba, Japan

- Explored linear diffusive coupled neurons (FHN coupled system) with heterogeneous external forcing to study pattern formation

Visualization

MATLAB

Linear algebra

SKILLS

Python

NumPy

Plotly

Pytest

Scikit-learn

Pandas

Keras

FastAPI

MongoDB

SQL

MLFlow

Git/GitHub

AWS

Linux

Docker

EDUCATION

M.Tech in Mechanical Engineering

IIT-B

📅 Jul 2017 - Nov 2018

- Specialization in CADA
- Successfully designed process to predict the failure time of new installed machine on the network to minimize the operation down time
- Proposed and implemented standard template to digitally store properties of machine component from different vendors, optimising the digital processing of components

B.Tech in Mechanical Engineering

IIT-B

📅 Jul 2013 - Jun 2017

- Successfully headed official video channel of IIT-BBC, leading a team of 6 conveners, creating 60+ videos and covering 35+ events, with nearly 2 million views
- Data Analysis and Interpretation
- Statistical Machine Learning and Data Mining

EXTRACURRICULAR

- Mentored 100+ students to produce 20+ short films during Freshizza festival
- Core team member of "Mechanical Freshie", a video with more than 630,000 views
- Supported students with physics classes for IIT-JEE exam

CERTIFICATION

- Data Analysis with Pandas and Python
- Python for Timeseries Data Analysis