Mahesh Choudhary

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Bachelor of Technology
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Education

Degree	Institute	Board / University	Year
B.Tech	Indian Institute of Technology , Roorkee	IIT Roorkee	2022-2026
Senior Secondary	KVM Senior Secondary School, Sikar	RBSE	2022
Matriculation	Sethi Senior Secondary School, Tonk	RBSE	2020

Experience

- **Data Science Intern Medical Image Analysis** *July 2025 - August 2025*
  IIPP, Taiwan Taiwan
  – Designed and implemented **CNN** and **ResNet50-base DL** pipelines for pneumonia classification from **chest X-ray images**
  – Validated **Transfer learnings efficiency** in addressing data scarcity challenges in **Medical image analysis**
  – Achieved **90.1 % accuracy** using a fine-tuned **ResNet50 model** with data augmentation and class weighting

- **Data Analyst Intern** *May 2024 - June 2024*
  Paragon IT Service PVT. LTD. Delhi
  – Analyzed over **35,000+ loan records**, including loan applications, funding, and repayment trends using SQL queries
  – Analyzed a Power BI dashboard tracking **$435.8M** in funding and visualizing **15.8 % MoM growth** in repayments
  – Visualized the **12 % average interest rate** and **13.3 % DTI ratio** , providing insights into borrower financial health

Projects

- **Optimizing Air Travel using Predictive Analytics for Flight Delay Forecasting** *June 2025 - July 2025*
  Society of Business, IITR **Github**
  – Built ML models for flight-delay prediction using Logistic Regression and Gradient Boosting, achieving **87 % accuracy**
  – Analyzed large-scale aviation datasets to identify key operational factors contributing to delays and inefficiencies
  – Used **SHAP and OAI insights** to recommend data-driven strategies that reduce operational delays and improve efficiency

- **Heart Failure Prediction** *Oct 2024 - Nov 2024*
  Explorin **Github**
  – Analyzed large-scale cardiovascular data to identify key mortality drivers and quantify global disease impact
  – Built and optimized an **SVM model** with rigorous data preprocessing and evaluation for mortality prediction
  – Developed and tuned an **ANN** using early stopping, testing multiple batch sizes and epochs to maximize performance

- **Multidimensional Analysis of NHANES Data** *June 2024 - July 2024*
  Explorin **Github**
  – Integrated, cleaned, and standardized **NHANES healthcare datasets** to enable robust high-dimensional analysis
  – Applied **PCA** for dimensionality reduction, identifying key patterns and optimizing variance capture
  – Implemented **k-means and dbscan** clustering on pca-transformed data to uncover meaningful population health segments

- **Turkeys SDG Achievements and India's Net-Zero Vision** *Dec 2024 - Feb 2025*
  Society of Business, IITR **Github**
  – Applied **K-Means clustering** in Python to analyze global SDG progress trends from 2005–2015
  – Conducted a case study on Turkey's top performance **2.36 % growth** to identify high-impact sustainability policies
  – Designed a **five-pillar strategic** roadmap for India to achieve **Net-Zero Emissions by 2070**

- **Music Store Analysis Using SQL** *Mar 2024 - Apr 2024*
  Explorin **Github**
  – Analyzed a music store database using SQL to uncover customer behavior, sales trends, and popular genres
  – Wrote complex SQL queries using joins, aggregations, and subqueries to answer real business-driven analytical questions
  – Identified top-performing artists, genres, and countries to support data-driven decision-making for the music store

Technical Skills

- **Programming Languages**: Python, SQL
- **Tools and Frameworks**: MySQL, Pandas, NumPy, Matplotlib & Seaborn, Scikit Learn, TensorFlow, Keras
- **Operating Systems**: English, Hindi, Rajasthani

Positions of Responsibility

- **Co-Convenor**, Thomso, IITR *July 2025 - Present*
- **President**, Sports Council, IITR *January 2025 - April 2025*
- **Secretary**, Think India Club, IITR *October 2024 - June 2025*
- **Additional Secretary**, Team MIESS, IITR *June 2024 - May 2025*