

# Rishabh Indoria

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**Summary** — Skilled in machine learning, data analysis, and AI development, with hands-on experience in building predictive models, performing data preprocessing, and optimizing algorithms for impactful real-world applications.

## Skills

ML/AI PyTorch, Scikit-learn, Tensorboard, imblearn

Data Science Pandas, NumPy, Matplotlib, Seaborn, SQL

## Experience

### Samsung Research Institute - Delhi

Research Intern

May 2025 – July 2025

- Built a PoC distilling a vision encoder from VLM (BLIP) with ResNet-50 for open-vocabulary classification on COCO.
- Designed a custom loss merging Affinity Mimicking Loss and MSE with trainable weights for better embedding alignment.
- Used a two-stage distillation framework—projection alignment then backbone distillation, adapted from an IISc paper.

### Indira Gandhi Center of Atomic Research

Research Intern

Jul 2023 – Dec 2024

- Implemented open-source network analysis tools to enhance the security infrastructure of ICS networks.
- Conducted assessments of ICS network vulnerabilities, leveraging open-source tools to identify potential security risks.
- Conducted analysis of network traffic, utilizing open-source tools for anomaly detection and intrusion detection.

## Education

### Indian Institute of Science, Bangalore

Masters of Technology in Artificial Intelligence

### Birla Institute of Technology and Science, Pilani

Bachelor of Engineering in Electrical and Electronics

## Projects

### Predicting Hard Drive Failures - Data Analytics

April 2024 – April 2024

- Developed a predictive model for hard drive failure leveraging ML techniques and SMART attribute data in the Walmart Hackathon, collaborating closely with team members to identify key features and optimize model performance.
- Enhanced model accuracy by engineering features, improving reliability in identifying drive failures.
- Collaborated closely on algorithm selection, presenting project findings and the model at the Walmart Hackathon.

### Recipe for Rating - Machine Learning

Jan 2024 – April 2024

- Developed a predictive pipeline to preprocess numeric, categorical, and text data, achieving a top Kaggle score of 0.78.
- Optimized machine learning models, including Random Forest, MLP, and AdaBoost, securing Rank 118/950.
- Tackled class imbalance using ensemble learning and class weighting to improve model accuracy on biased datasets.

### Dietary Recommendations based on Prescriptions - AI in Healthcare

Jan 2024 – May 2024

- Developed an innovative solution to generate personalized dietary recommendations by extracting and processing text from medical prescriptions using advanced OCR technology, ensuring precise data retrieval for tailored dietary advice.
- Leveraged large language models (LLMs) and prompt engineering to create dietary advice based on medical data.
- Enhanced accuracy of dietary recommendations, demonstrating potential of technologies to improve healthcare.

## Workshops

### Computer Vision in Supply Chain

Organized by: Walmart GlobalTech — Date: April 2024

- Explored time series data analysis and forecasting, enabling informed decision-making based on temporal patterns.
- Learned supply chain optimization using simulated annealing to improve efficiency and cut costs.
- Explored transformer use in computer vision, tackling 3D bin packing challenges to enhance image processing.

## Certifications

### DeepLearning.AI Tensorflow Developer

Coursera & DeepLearning.AI

### Reinforcement Learning

Coursera & University of Alberta