# **ROSHAN KUMAR B**

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## SUMMARY

Motivated undergraduate in **Artificial Intelligence and Data Science**, with aspirations to excel as a Machine Learning Engineer and Software Developer. Possessing expertise in Computer Vision, Generative AI, and Natural Language Processing, I am actively pursuing internships to apply this knowledge in real-world settings and make meaningful contributions to the domains of AI and software development.

#### SKILLS

Languages	Data Analytics Tools	<u>Domain Skills</u>	<b>Frameworks</b>
Python	Numpy	Computer Vision	Pytorch
JavaScript	Pandas	NLP	Tensorflow
HTML	Matplotlib	Image Processing	Scikit-Learn
SQL	Seaborn	GANs	Django
С	Hadoop		

#### EXPERIENCE

### Machine Learning Intern | NIT Trichy

- The Car Price detection project predicts car prices based on specified variables using various models like Linear Regression, Decision Tree, Random Forest, Ada Boost Regressor, Gradient Boost, and XGBoost. Visualization was performed using Matplotlib and Seaborn to compare model accuracies
- and analyze correlations among selected variables.
  Collaborated with fellow interns to analyze potential obstacles in training GANs for data augmentation purposes, and successfully devised and implemented algorithms to mitigate and overcome these challenges.
- Developed a Machine Learning Pipeline Python using PyTorch and scikit-learn to detect image forgeries, successfully identifying and highlighting suspicious areas in images through computer vision techniques and neural networks.

#### EDUCATION

**B. Tech** | Artificial Intelligence and Data Science 2021 – 2025

#### **CGPA:** 8.49/10

Representative of The Odyssey Coding Club of AI & DS Department

#### **Additional Courses**

Relevant Coursework: Machine Learning Specialization | Stanford, Deep Learning Specialization | Deeplearning.ai

#### PROJECTS

#### Health App

The HealthApp dataset, capturing 10+ days of Android device usage, underwent concise Pandas analytics. Initial insights from dataset description and time-based analysis revealed user activity patterns. Event counts per component provided insights into occurrence patterns, contributing to a brief understanding of user activity and dataset composition in the HealthApp context.

#### Object Detection and Crime Prevention

Well trained and enhanced YOLO models, featuring distinct objects in a moving frame in railway CCTV cameras. The system addresses crime detection, crowd management, and work monitoring, showcasing my expertise in computer vision and project management.

#### Image to Prompt

A CNN and LSTM based model developed using Pytorch to generate descriptive prompts from images, inverting the Stable Diffusion Image generation approach.

June 19<sup>th</sup> 2023 – Present

Saranathan College of Engineering Trichy