

Nagendra K P

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Profile

Aspiring Data Scientist with a foundational understanding of Deep Learning, Computer Vision, and Machine Learning. Eager to leverage my academic background and self-taught projects to contribute to innovative data-driven solutions in a professional environment. Passionate about continuous learning and applying theoretical knowledge to real-world challenges.

Professional Experience

10/2024–present
Bangalore, India

Data Science Intern, Nasscom Foundation

- Processing, cleansing and verifying the integrity of data used for analysis. Doing analysis and presenting results in a clear manner.
- Working on building and optimizing the state-of-the-art Machine learning and Deep Learning models.
- Working and learning on how to create and automate the project lifecycle with the help of creating data pipelines.

Projects

Safety Helmet Detection Model Based on Improved YOLO-M ([link](#))

- The “**Safety Helmet Wearing Detection Model**” utilizes an enhanced **YOLO-M architecture** for real-time detection of safety helmet compliance.
- The project involves assembling a **dataset of images, preprocessing, and fine-tuning** the YOLO-M model specifically for helmet detection. Post-training, the model performance will be evaluated using metrics like **precision and recall**.
- It will be deployed for **static image and video analysis** to improve safety in various environments.

Forest Fire Prediction ([link](#))

- Forest Fire Prediction is a **Supervised Machine learning** problem statements. Using **Regression** is build that detected future fires based on certain Weather report.
- **HyperParameter Tuning** performed using **RidgeCV** for the model which performed best for both Regression and Classification.
- Model used **Linear regression, Lasso Regression, Ridge Regression**.
- framework is created using **Flask**.

Movie reviews sentiment analysis([link](#))

- Movie reviews sentiment analysis is a **natural language processing**, where we use NLP techniques to extract useful words of review and based on these words we can **use binary classification** to predict the movie sentiment if it's **positive or negative**.
- **Data Preprocessing** : Loading the dataset Encoding output to binary (Positive : 1 , Negative : 0).
- **Data cleaning** : Remove HTML tags, special characters, convert everything to lowercase and stopwords stemming.

Machine Learning Practical Implementations([link](#))

- **Exploratory Data Analysis (EDA)**: understand the dataset by visualizing distributions, identifying outliers, and uncovering patterns using tools such as **Matplotlib and Seaborn**.
- **Feature Engineering**: by creating new features from existing ones, such as **polynomial features, Handled missing data and categorical variables**.
- **Model Training and Evaluation**: models including linear regression, decision trees, and support vector machines (SVM) to predict outcomes and classify data. GridSearchCV and RandomizedSearchCV to achieve the best performance metrics.
- **Model Accuracy and Validation**: metrics like accuracy, precision, recall, F1-score.

Skills

Programming languages :

Python

Deep learning algorithms :

ANN, CNN, RNN

Database

SQL, MongoDB

Gen AI

Transformers, Langchain

Machine learning algorithms :

Linear regression, Logistic regression, Decision tree, Random forest,XGBoost

Computer Vision :

Image Classification, Object Detection, Image Segmentation, OpenCV

Frameworks

TensorFlow, PyTorch, NLTK

Mlops

Docker, GIT

Education

2020- 2024
Bangalore, India

Bachelor of Engineering **(CSE)**, *VTU
Cambridge Institute of Technology*

7.17 CGPA

2024- 2026
Bangalore, India

Master of Technology **(AIML)**,
M. S. Ramaiah University of Applied Sciences

First Year

Certificates

Microsoft Certified: Azure AI Fundamentals

Microsoft Certified: Azure Fundamentals