

Machine Learning ■

A collection of my Machine Learning projects, experiments, and implementations.

■ What I Learned & Achieved ■

This repository is my hands-on journey into **Machine Learning**. While building and experimenting with different models, I gained strong practical knowledge in:

- ■ Understanding **supervised & unsupervised learning** techniques
- ■ Implementing **classification, regression, and clustering algorithms**
- ■ Data preprocessing, cleaning, and **feature engineering**
- ■ Applying models like **Linear Regression, Logistic Regression, Decision Trees, Random Forests, KNN, SVM**
- ■ Evaluating models with **accuracy, precision, recall, and F1-score**
- ■ Using **Python libraries (NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn)** for ML workflows
- ■ Building end-to-end **ML pipelines** from raw data to model deployment-ready outputs

■ **Achievement:** This repo shows my growth from learning basic concepts to implementing real ML algorithms. It's a foundation for advanced AI/ML projects like Deep Learning, Natural Language Processing, and Computer Vision.

■ Installation & Usage

```
```bash
git clone https://github.com/AbdulRazak5764/Machine_learning.git
cd Machine_learning
pip install -r requirements.txt
python filename.py
```
```

■ Project Highlights

- Regression (Linear, Multiple, Polynomial)
- Classification (Logistic Regression, Decision Trees, Random Forests, SVM, KNN)
- Clustering (K-Means, Hierarchical Clustering)
- Data Preprocessing & Feature Engineering
- Model Evaluation & Metrics

■ Future Work

- Deep Learning (Neural Networks, CNNs, RNNs)
- Natural Language Processing (NLP)
- Computer Vision projects

■ Contact / Connect

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