<https://www.kaggle.com/datasets/jainilcoder/online-payment-fraud-detection>

<https://www.kaggle.com/datasets/nirmaldash/salary-prediction-decision-tree-regression/code>

<https://amanxai.com/2020/11/15/machine-learning-projects/>

**<https://www.geeksforgeeks.org/machine-learning/machine-learning-projects/>**

**PROJECTS**

**MACHINE LEARNING**

1. House price predictions(bengleure)
2. Insurance fraud detection
3. Insurance amount predictions
4. Car sales price predictions
5. Credit card Fraud detections

<https://www.geeksforgeeks.org/machine-learning/ml-credit-card-fraud-detection/>

1. Heart Disese predictions
2. Ipl total run predictionsscore
3. Inventory\_Demand\_Forecasting\_using\_Machine\_Learning\_Python

<https://amanxai.com/2020/11/14/stock-price-prediction-using-machine-learning/>

<https://www.geeksforgeeks.org/machine-learning/ola-bike-ride-request-forecast-using-ml/>

<https://www.geeksforgeeks.org/machine-learning/python-implementation-of-movie-recommender-system/>

<https://www.geeksforgeeks.org/machine-learning/waiters-tip-prediction-using-machine-learning/>

<https://www.geeksforgeeks.org/machine-learning/medical-insurance-price-prediction-using-machine-learning-python/>

<https://www.geeksforgeeks.org/machine-learning/box-office-revenue-prediction-using-linear-regression-in-ml/>

<https://amanxai.com/2020/11/28/youtube-trending-videos-analysis-with-python/>

<https://www.geeksforgeeks.org/machine-learning/recognizing-handwritten-digits-in-scikit-learn/>

**UNSUPERVISE LEARNING PROJECTS**

**<https://www.geeksforgeeks.org/machine-learning/unsupervised-machine-learning-examples/>**

1. <https://github.com/shoaib555/Unsupervised-Learning?tab=readme-ov-file>
2. <https://nbviewer.org/github/shoaib555/Unsupervised-Learning/blob/main/IPL.ipynb>

<https://www.geeksforgeeks.org/machine-learning/dogecoin-price-prediction-with-machine-learning/>

Tensor flow and pytorch

1. <https://amanxai.com/2020/11/25/gender-classification-with-python/#google_vignette>
2. <https://amanxai.com/2020/11/17/face-mask-detection-with-machine-learning/>
3. <https://amanxai.com/2020/08/16/fashion-recommendation-system/>
4. Digit recognizations
5. <https://amanxai.com/2020/08/04/named-entity-recognition-ner/>

## **Beginner Projects**

### **1. Customer Segmentation Using K-Means**

* **Goal**: Group customers based on purchasing behavior (RFM, spending patterns).
* **Techniques**: K-Means, PCA
* **GitHub**:  
   🔗<https://github.com/Mjrovai/Machine-Learning-A-Z/blob/master/Part%204%20-%20Clustering/Section%2024%20-%20K-Means%20Clustering/K-Means%20Clustering.py> 🔗<https://www.kaggle.com/code/fabiendaniel/customer-segmentation>

### **2. Movie Recommendation System**

* **Goal**: Recommend movies based on similarity in user behavior or content.
* **Techniques**: K-Means or Cosine Similarity (unsupervised), TF-IDF
* **GitHub**:  
   🔗<https://github.com/khanhnamle1994/movielens> 🔗<https://www.kaggle.com/code/ibtesama/getting-started-with-a-movie-recommendation-system>

### **3. Iris Dataset Clustering**

* **Goal**: Cluster flowers using unsupervised learning.
* **Techniques**: K-Means, Hierarchical Clustering
* **Tutorial**:  
   🔗<https://scikit-learn.org/stable/auto_examples/cluster/plot_cluster_iris.html>

## **🔷 Intermediate Projects**

### **4. Anomaly Detection in Network Traffic**

* **Goal**: Detect unusual activity using unsupervised methods.
* **Techniques**: Isolation Forest, DBSCAN
* **GitHub**:  
   🔗<https://github.com/yzhao062/pyod> (PyOD library for outlier detection)  
   🔗<https://github.com/krishnaik06/Anomaly-Detection>

### **5. Dimensionality Reduction with PCA & t-SNE**

* **Goal**: Visualize and reduce features in high-dimensional data.
* **Techniques**: PCA, t-SNE
* **GitHub**:  
   🔗<https://github.com/scikit-learn/scikit-learn/blob/main/examples/decomposition/plot_pca_vs_lda.py> 🔗<https://www.kaggle.com/code/jeffd23/visualizing-word-vectors-with-t-sne>

### **6. Clustering Countries by Socioeconomic Indicators**

* **Goal**: Cluster countries based on World Bank indicators.
* **Techniques**: K-Means, Hierarchical Clustering, PCA
* **GitHub**:  
   🔗<https://github.com/llSourcell/K-Means-Clustering/blob/master/Countries.ipynb>

## **🔶 Advanced Projects**

### **7. Market Basket Analysis**

* **Goal**: Find product combinations frequently bought together.
* **Techniques**: Apriori Algorithm, FP-Growth
* **GitHub**:  
   🔗<https://github.com/rasbt/mlxtend/tree/master/examples/frequent_patterns> 🔗<https://www.kaggle.com/code/varsharamakrishnan/market-basket-analysis-apriori-association-rules>

### **8. News Topic Modeling with LDA**

* **Goal**: Automatically detect topics from news articles.
* **Techniques**: Latent Dirichlet Allocation (LDA), NMF
* **GitHub**:  
   🔗<https://github.com/rohitrox/Topic-Modeling> 🔗<https://www.kaggle.com/code/dschettler8845/topic-modeling-with-lda-nmf>

### **9. Autoencoders for Anomaly Detection**

* **Goal**: Use reconstruction loss to detect outliers.
* **Techniques**: Deep Autoencoders (Keras/PyTorch)
* **GitHub**:  
   🔗<https://github.com/keras-team/keras-io/blob/master/examples/structured_data/anomaly_detection.py> 🔗<https://github.com/udacity/anomaly-detection>

### **10. Clustering Faces using Unsupervised Learning**

* **Goal**: Group similar face images.
* **Techniques**: K-Means, PCA, t-SNE
* **GitHub**:  
   🔗<https://github.com/ritheshkumar95/Face-Clustering-using-KMeans>