1. Customer Segmentation for E-Commerce
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15. Social Media Sentiment Analysis
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17. Mall Customer Segmentation
18. Car Price Prediction
19. Titanic Survival Prediction
20. Diabetes Prediction

1. Customer Segmentation for E-Commerce

- **Concepts/Algorithms:** K-means clustering, data preprocessing, feature engineering
- **Dataset:** E-commerce data
- **Project Task:** Segment customers based on their purchase behavior (frequency, monetary value).

2. Movie Recommendation System

- **Concepts/Algorithms:** Naive Bayes classification, collaborative filtering
- **Dataset:** MovieLens Dataset
- **Project Task:** Build a recommendation system that suggests movies to users based on their preferences.

3. Predicting Housing Prices

- **Concepts/Algorithms:** Linear regression, feature engineering, missing data handling
- **Dataset:** Boston Housing Dataset
- **Project Task:** Predict house prices based on various features like number of rooms, location, etc.

4. Detecting Spam Emails

- **Concepts/Algorithms:** Naive Bayes classifier, text preprocessing, feature extraction
- **Dataset:** Spam Email Dataset
- **Project Task:** Classify emails as spam or not based on their content.

5. Customer Churn Prediction

- **Concepts/Algorithms:** Logistic regression, feature engineering, missing values
- **Dataset:** Customer Churn Dataset
- **Project Task:** Predict whether a customer is likely to churn based on their behavior.

6. Handwritten Digit Recognition

- **Concepts/Algorithms:** SVM, data preprocessing (image data), feature extraction
- **Dataset:** MNIST Handwritten Digits
- **Project Task:** Classify handwritten digits using SVM or other classification techniques.

7. Stock Price Prediction

- **Concepts/Algorithms:** Linear regression, feature engineering, time series analysis
- **Dataset:** Yahoo Finance Data
- **Project Task:** Predict stock prices using linear regression or basic time series analysis.

8. Credit Card Fraud Detection

- **Concepts/Algorithms:** Logistic regression, feature engineering, anomaly detection
- **Dataset:** Credit Card Fraud Dataset
- **Project Task:** Detect fraudulent transactions in a dataset of credit card transactions.

9. Weather Prediction

- **Concepts/Algorithms:** Linear regression, missing data handling, data visualization
- **Dataset:** Weather Data
- **Project Task:** Predict future temperature based on historical weather data.

10. Sentiment Analysis of Movie Reviews

- **Concepts/Algorithms:** Naive Bayes classifier, text preprocessing, sentiment analysis
- **Dataset:** IMDB Reviews Dataset
- **Project Task:** Classify movie reviews as positive or negative based on text.

11. Clustering Countries Based on Development Indicators

- **Concepts/Algorithms:** K-means, GMM, feature scaling
- **Dataset:** World Bank Indicators
- **Project Task:** Cluster countries based on factors like GDP, education, and healthcare.

12. Breast Cancer Detection

- **Concepts/Algorithms:** SVM, logistic regression, feature engineering
- **Dataset:** Breast Cancer Wisconsin Dataset
- **Project Task:** Classify whether a tumor is malignant or benign.

13. Iris Flower Classification

- **Concepts/Algorithms:** Naive Bayes classifier, SVM, data visualization
- **Dataset:** Iris Dataset
- **Project Task:** Classify iris flowers into species based on petal and sepal measurements.

14. House Price Clustering

- **Concepts/Algorithms:** K-means clustering, GMM, feature engineering
- **Dataset:** California Housing Dataset
- **Project Task:** Cluster houses based on their features like size, location, and price.

15. Social Media Sentiment Analysis

- **Concepts/Algorithms:** Text preprocessing, Naive Bayes, sentiment analysis
- **Dataset:** Twitter Sentiment Analysis Dataset
- **Project Task:** Analyze sentiment from tweets and classify them as positive or negative.

16. Predicting Heart Disease

- **Concepts/Algorithms:** Logistic regression, SVM, data preprocessing
- **Dataset:** Heart Disease Dataset
- **Project Task:** Predict whether a patient is likely to have heart disease based on various health metrics.

17. Mall Customer Segmentation

- **Concepts/Algorithms:** K-means clustering, GMM, feature engineering
- **Dataset:** Mall Customer Dataset
- **Project Task:** Segment mall customers based on spending habits and income levels.

18. Car Price Prediction

- **Concepts/Algorithms:** Linear regression, feature engineering, data preprocessing
- **Dataset:** Car Prices Dataset
- **Project Task:** Predict the price of a car based on its features (brand, mileage, etc.).

19. Titanic Survival Prediction

- **Concepts/Algorithms:** Logistic regression, SVM, feature engineering
- **Dataset:** Titanic Dataset
- **Project Task:** Predict whether passengers would survive the Titanic disaster based on their characteristics.

20. Diabetes Prediction

- **Concepts/Algorithms:** Logistic regression, SVM, data preprocessing
- **Dataset:** Pima Indians Diabetes Dataset
- **Project Task:** Predict whether a person has diabetes based on health data.