Classification Applications

1. **Spam Detection**:

    Classifying emails as "spam" or "not spam" based on their content.

2. **Image Recognition**:

    Identifying objects within images, such as distinguishing between cats and dogs.

3. **Medical Diagnosis**:

    Predicting diseases based on patient data, like classifying tumors as benign or malignant.

4. **Sentiment Analysis**:

    Analyzing text to determine if the sentiment is positive, negative, or neutral.

5. **Fraud Detection**:

    Identifying fraudulent transactions in banking and finance.

Regression Applications

1. **Sales Forecasting**:

   Predicting future sales based on historical data.

2. **Weather Prediction**:

   Estimating future temperatures or rainfall amounts.

3. **Stock Price Prediction**:

   Forecasting the future prices of stocks based on past performance.

4. **Real Estate Valuation**:

   Estimating the value of properties based on various features like location, size, and amenities.

5. **Energy Consumption**:

   Predicting future energy usage based on historical consumption patterns.