


Supervised Learning Algorithms

Supervised Learning is mainly divided into:

A. Regression Algorithms (Predict values)

1. Linear Regression  (already done)
2. Polynomial Regression
3. Ridge Regression
4. Lasso Regression
5. Elastic Net Regression
6. Decision Tree Regressor
7. Random Forest Regressor
8. Support Vector Regression (SVR)

B. Classification Algorithms (Predict Categories)

1. Logistic Regression
2. K-Nearest Neighbors (KNN)
3. Decision Tree Classifier
4. Random Forest Classifier
5. Support Vector Machine (SVM)
6. Naive Bayes
7. Gradient Boosting
8. XGBoost

Best Algorithms to Cover in AI Fundamentals

For the batch :

- Linear Regression
- Logistic Regression
- Decision Tree
- Random Forest
- KNN

Common Step Structure (Same for Every Algorithm)

1. Objective

What problem are we solving?

2. Install Libraries

```
pip install numpy pandas matplotlib scikit-learn
```

3. Import Libraries

4. Load / Create Dataset

5. Separate Features and Target

6. Train-Test Split

7. Create Model

8. Train Model

9. Make Predictions

10. Evaluate Model

11. Predict New Data

12. Visualization (if applicable)