Part 4 – Feature Engineering

Examples:

- Create a new feature: Programming Average = `(Python + DB)/2`.
- Create a binary feature: `isAdult` = 1 if `Age >= 25`, else 0.
- Transform `studyHOURS` into categories (Low / Medium / High).

Question: Which engineered feature do you think would add the most predictive power to the model?

Part 5 – Feature Scaling

- **Detect Numeric Columns**
- **Apply Scaling**
    - **Option 1:** StandardScaler (mean=0, std=1) → good for SVM, Logistic Regression.
    - **Option 2:** MinMaxScaler (range 0–1) → good for Neural Networks, KNN.

Part 6 – Encoding Categorical Data

- Detect Categorical Columns
- Handle Encoding