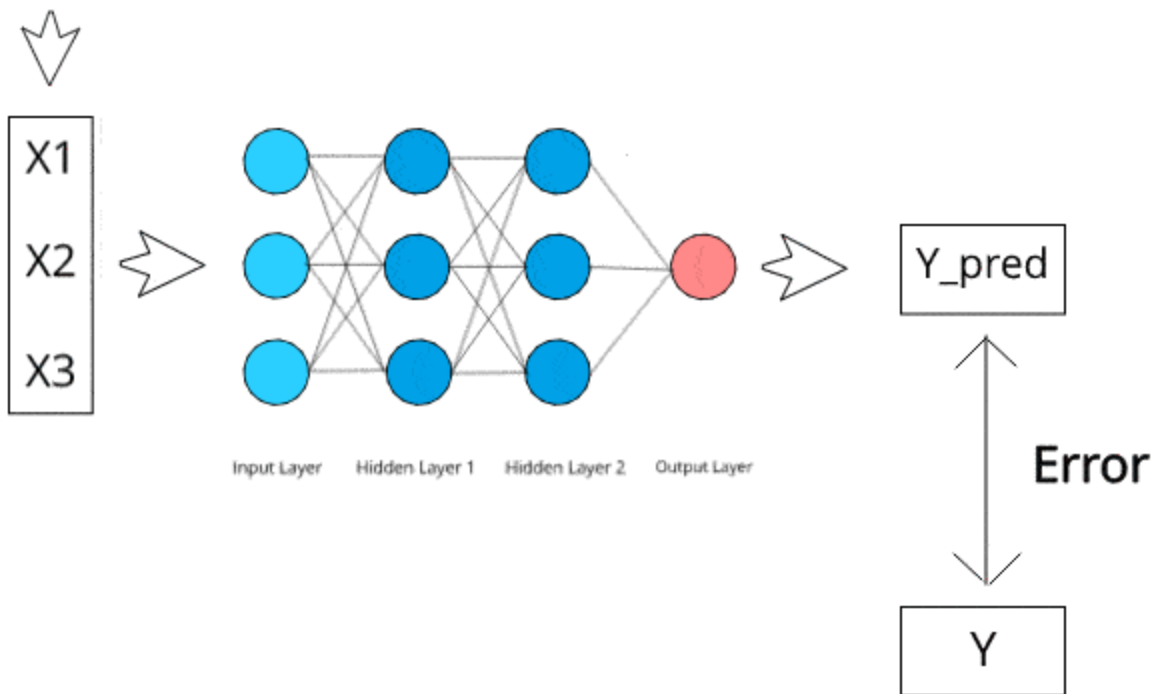


LOSS FUNCTION

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- A loss function, also known as a cost function or error function, is a mathematical function that quantifies the difference between the predicted output of a machine learning model and the actual target output.
- The goal of training a machine learning model, particularly in supervised learning, is to minimize this loss function, thereby improving the accuracy and performance of the model.
- The loss function provides a measure of how well the model's predictions match the true values.

Types of Loss Functions

- Different types of loss functions are used depending on the nature of the problem (regression, classification, etc.).
- Here are some common loss functions:
 - **For Regression:**
 - **Mean Squared Error (MSE):**
 - **Mean Absolute Error (MAE):**
 - **For Classification:**
 - **Binary Cross-Entropy (Log Loss):**
 - **Categorical Cross-Entropy:**

Choosing a Loss Function

- The choice of a loss function depends on the problem you are trying to solve:
 - **Regression:** Typically use MSE or MAE.
 - **Binary Classification:** Typically use Binary Cross-Entropy.
 - **Multi-Class Classification:** Typically use Categorical Cross-Entropy.