

## **Logistic Regression**

- **Prediction Function:**

**The Sigmoid function is used to predict the output. It provides the probability of a particular event occurring.**

- **Data Normalization:**

**Z-score normalization is used to standardize the dataset.**

- **Cost Function:**

**The cost is computed using the Mean Squared Error (MSE) function.**

- **Parameter Updates:**

**The Gradient Descent algorithm is employed to update the parameters  $w$  and  $b$ .**

- **Learning Rate:**

**The learning rate controls the step size during the gradient descent process when updating  $w$  and  $b$ .**