

Chapter 5: Loss Functions and Metrics

What Are Loss Functions?

Loss functions measure how well the model's predictions align with the true values. The goal is to minimize the loss during training.

Types of Loss Functions:

- Mean Squared Error (MSE): Commonly used in regression tasks.
- Cross-Entropy Loss: Used for classification tasks, particularly binary and multi-class classification.
- Accuracy and Precision: Metrics to evaluate how well the model is performing.

Code Example: Defining Loss in TensorFlow

```
python  
loss = keras.losses.BinaryCrossentropy() # Binary Crossentropy for binary  
classification
```

Key Topics to Explore:

- Loss Functions for Different Tasks: Understand how to choose the right loss function for your task.
- Evaluating Model Performance: Use metrics such as accuracy, F1-score, precision, and recall.