Single numbers that indicate the deviation between the expected and actual values for a single data point are called "scalars" when discussing loss functions. Predictions made by a model may be quantified using these values.

In a regression issue, when the aim is to make a continuous-value prediction, Mean Squared Error (MSE) is a typical loss function. The mean square error (MSE) is the average of the squared deviations between the predicted and observed values. The computation yields a numeric number that quantifies the model's performance on the dataset.

Classification problems, in which each data point must be assigned a label, often use crossentropy loss as one of their loss functions. The error between the model's output probabilities and the actual labels is what this function calculates. It normalises the difference to a single number.

During training, reducing this scalar value is a priority for both scenarios. Methods like gradient descent do this by adjusting the model's parameters to achieve a smaller loss.

Remember, the loss function is crucial in training a machine learning model because it guides the optimization process. The goal of the model is improved prediction on new data by reducing the loss.

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