OVERFITTING A MODEL

Overfitting occurs when a model becomes too complex and starts to capture the noise in the data rather than the underlying patterns. This means that the model is able to fit the training data very well, but it is not able to generalize to new, unseen data.

UNDERFITTING A MODEL

Underfitting, on the other hand, occurs when a model is too simple and fails to capture the underlying patterns in the data. This means that the model does not fit the training data well and will also not perform well on new, unseen data.

OVERCOMING OVERRFITTING

To overcome overfitting, one can use regularization techniques such as L1 and L2 regularization or dropout. Regularization penalizes complex models and encourages them to be simpler, thus reducing the chances of overfitting. Other techniques such as data augmentation or increasing the size of the training data can also help to reduce overfitting.

DRCFS

To overcome underfitting, one can use more complex models, increase the amount of training data, or use more informative features.

VARIANCE

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Variance refers to the amount by which the model output changes when the input data changes. A model with high variance is sensitive to small changes in the input data, which can lead to overfitting.

BIAS

Bias refers to the amount by which the model output differs from the true value. A model with high bias is not able to capture the underlying patterns in the data, which can lead to underfitting.

YAYYY ITS QUIZZ TIME HEHE