**[Que-50.5] - Explain the bias-variance tradeoff.**

### **Bias-Variance Tradeoff**

* **Bias**:
  + Error due to overly simplistic assumptions in the learning algorithm.
  + High bias can cause the model to underfit the data.
* **Variance**:
  + Error due to too much complexity in the learning algorithm.
  + High variance can cause the model to overfit the data.

The tradeoff:

* **High Bias** leads to underfitting.
* **High Variance** leads to overfitting.
* The goal is to find a balance that minimizes both bias and variance to achieve better generalization on new data.