**[Que-50.13] - What is the curse of dimensionality in machine learning?**

### **Curse of Dimensionality**

**Definition:** The curse of dimensionality refers to the various phenomena that arise when analyzing and organizing data in high-dimensional spaces that do not occur in low-dimensional settings.

**Effects:**

* As the number of features increases, the volume of the feature space increases exponentially, making the available data sparse.
* This sparsity makes it difficult to generalize the model from training data, leading to overfitting.