In [ ]:
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"""
Q1. What is the curse of dimensionality reduction and why is it important in mach
Ans 1-the curse of dimensionality is callled on that time when we provide the
unnecessary feature to model which decrese the model accuracy

Q2. How does the curse of dimensionality impact the performance of machine learni
Ans -due to curse of dimensionality model is get overfit and hence the performanc



Q3. What are some of the consequences of the curse of dimensionality in machine l
they impact model performance?
Ans 3-As the dimensionality increases, the number of data points required for
good performance of any machine learning algorithm increases exponentially. The
reason is that, we would need more number of data points for any given
combination of features, for any machine learning model to be valid.


Q4. Can you explain the concept of feature selection and how it can help with dim
Ans 4 Feature selection is simply selecting and excluding given features without
changing them.Dimensionality reduction transforms features into a lower
dimension


Q5. What are some limitations and drawbacks of using dimensionality reduction tec
learning?
Ans 5-While doing dimensionality reduction, we lost some of the information, whic
It can be computationally intensive.
Transformed features are often hard to interpret


Q7. How can one determine the optimal number of dimensions to reduce data to
when using dimensionality reduction techniques?
Ans PCA?
Eigenvalue Decomposition and Singular Value Decomposition(SVD) from linear
algebra are the two main procedures used in PCA to reduce dimensionality.
"""
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In [ ]:
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