CLASS 17 14-06-2021

**QUESTIONS**

👉 What is a Feature?  
👉 What is feature Engineering?  
👉 What is an outlier in machine learning?  
👉 How does machine learning deal with outliers?  
👉 What is a heat map used for?  
👉 What is Z score in data science?

**ANSWERS**

1. In machine learning and pattern recognition, a **feature** is an individual measurable property or characteristic of a phenomenon. Choosing informative, discriminating and independent features is a crucial element of effective algorithms in pattern recognition, classification and regression.

2. **Feature engineering** is the process of using domain knowledge to extract features from raw data. A feature is a property shared by independent units on which analysis or prediction is to be done. Features are used by predictive models and influence results.

3. An **outlier** is an object that deviates significantly from the rest of the objects. They can be caused by measurement or execution error. The analysis of outlier data is referred to as outlier analysis or outlier mining.

4. Machine learning **deals with outliers** by following method. “Univariate method: This method looks for data points with extreme values on one variable. Multivariate method: Here, we look for unusual combinations of all the variables. Minkowski error: This method reduces the contribution of potential outliers in the training process.

5. A **heatmap** is a graphical representation of data that uses a system of color-coding to represent different values. Heatmaps are used in various forms of analytics but are most commonly used to show user behaviour on specific webpages or webpage templates.

6. Simply put, a **z-score** (also called a standard score) gives you an idea of how far from the mean a data point is. But more technically it's a measure of how many standard deviations below or above the population mean a raw score is. A z-score can be placed on a normal distribution curve.