

# DATA SCIENCE ASSIGNMENT

## Day - 38:

**1. Which clustering algorithm does not require specifying the number of clusters beforehand and can adapt to varying cluster shapes and sizes?**

**2. Which clustering algorithm is particularly effective in identifying clusters with varying shapes and densities and does not require specifying the number of clusters?**

**3. What is a key characteristic of Gaussian Mixture Models (GMM) in clustering?**

**4. How does LDA handle the trade-off between maximizing class separability and minimizing variance within classes?**

**5. Can Autoencoders be used for anomaly detection? If yes, How?**