

Anomaly Detection-1

Assignment Questions



Q1. What is anomaly detection and what is its purpose?

Q2. What are the key challenges in anomaly detection?

Q3. How does unsupervised anomaly detection differ from supervised anomaly detection?

Q4. What are the main categories of anomaly detection algorithms?

Q5. What are the main assumptions made by distance-based anomaly detection methods?

Q6. How does the LOF algorithm compute anomaly scores?

Q7. What are the key parameters of the Isolation Forest algorithm?

Q8. If a data point has only 2 neighbours of the same class within a radius of 0.5, what is its anomaly score using KNN with $K=10$?

Q9. Using the Isolation Forest algorithm with 100 trees and a dataset of 3000 data points, what is the anomaly score for a data point that has an average path length of 5.0 compared to the average path length of the trees?

Note: Create your assignment in Jupyter notebook and upload it to GitHub & share that github repository link through your dashboard. Make sure the repository is public.