Q 3.) Which method is more accurate and faster?

Ans.) The Local Outlier Factor (LOF) is more accurate than the Density Based Approach as the Accuracy Score for LOF is higher than that of Density Based Approach and the time for processing for LOF is somewhat faster than that of Density Based Approach. Hence LOF is more accurate and faster at processing than that of Density Based Approach.

The following are the plot comparisons of the ROC Curve for both the LOF and the Density Based Approach with their respective Accuracy Scores and Processing Times.

Chart, line chart

Description automatically generated

LOF ROC Curve

Graphical user interface, text

Description automatically generated

A picture containing shape

Description automatically generated

Density Based Approach ROC Curve

|  |  |  |
| --- | --- | --- |
| Methods | Local Outlier Factor (LOF) | Density Based Approach |
| Accuracy Scores | 0.6564 | 0.03804 |
| Time Taken | 0.0368 | 0.0565 |

Text

Description automatically generated