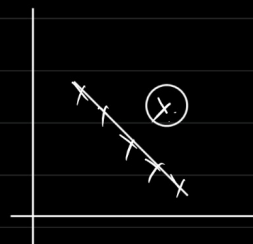


Anomaly detection (To detect outliers)

⇓

Abnormality

→ Anomaly detection algos are Unsupervised.



Why?

→ In few case Anomaly plays an important role.

→ sometimes to detect outliers traditional methods like Box plot, Violin plot fails.

Ex1

transaction amount	Acc.no
1000	-
2000	-
1500	-
3000	-
<u>2 Lakhs</u>	-

→ This customer being outlier, holds an important role. ⇒ Bank will target this customer for the loan.

∴ Outliers sometimes makes sense.

Ex2 → fraud transaction.

tr₁ - Delhi
tr₂ - Delhi
tr₃ - Delhi

} Normal

tr₄ - USA → you receive a msg ⇒ anomaly.

Ex3 → When you login a gmail or any Portal.

Ex4 VK. → 5, 10, 5, 4, 3, 5, 110

→ This outlier but important.

Ex5 Cancer prediction → Normally people don't have Cancer.

Ex6 → Fraud IP.

* Detection of outliers

- ① Isolation Forest Anomaly detection
- ② DBSCAN
- ③ Local Outlier Factor Anomaly detection.