Anomaly Detection of Time Series Data

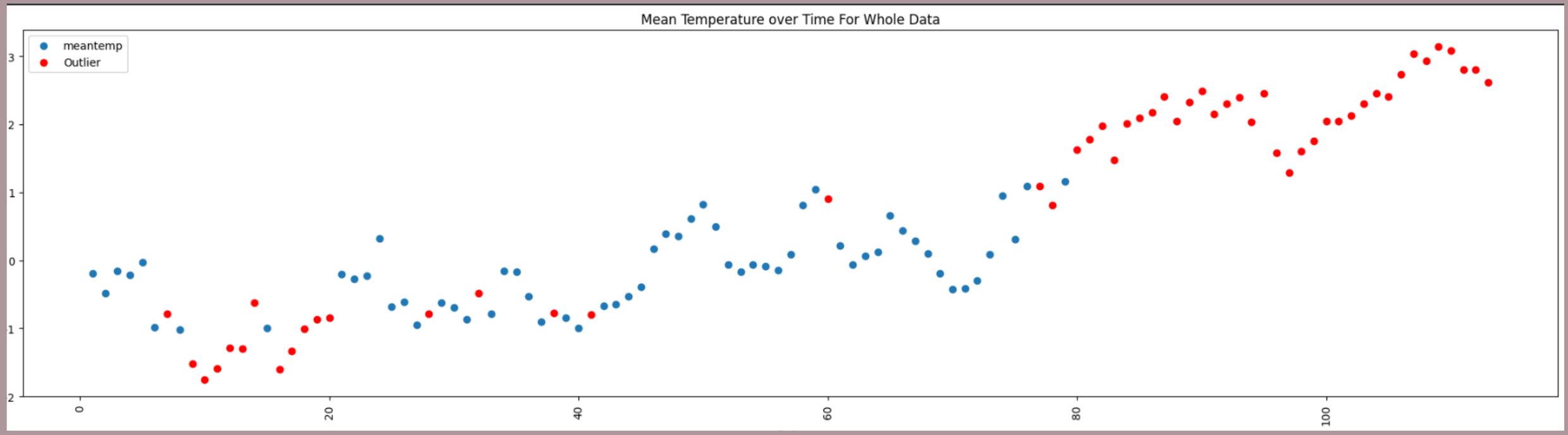
By Amrutha M and Harshit Agarwal

ARCHITECTURE

WE HAVE USED BOTH THE FOLLOWING TECHNIQUES TO DETECT ANOMALIES IN TIME SERIES DATA

- BUILDING A NEURAL NETWORK (AUTOENCODER) FOR ANOMALY DETCTION USING UNSUPERVISED LEARNING
- USING STATISTICAL METHODS FOR DETECTING ANOMALIES

OUTPUT FOR ANOMALY DETECTION OF DELHI CLIMATE DATASET USING AUTO-ENCODERS

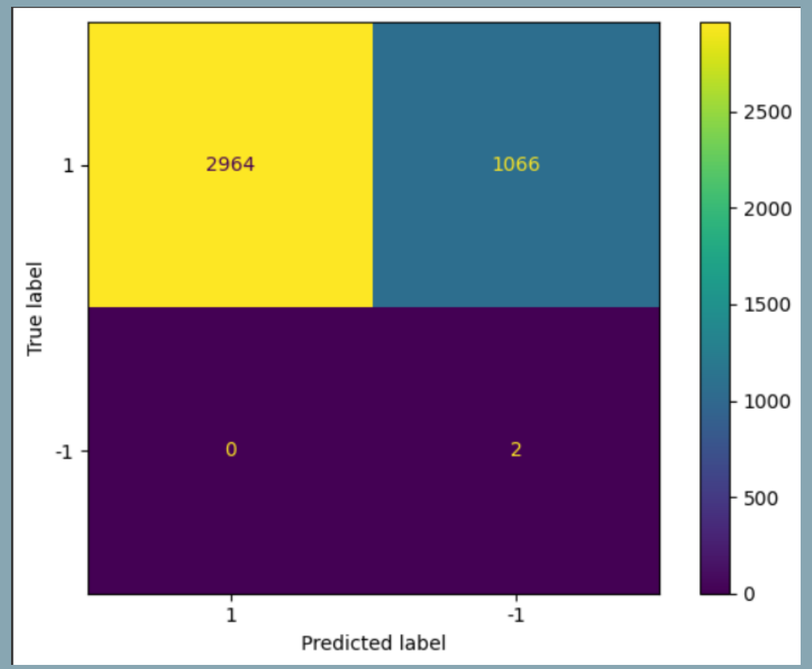


THE RED DOTS DEPICT OUTLIERS

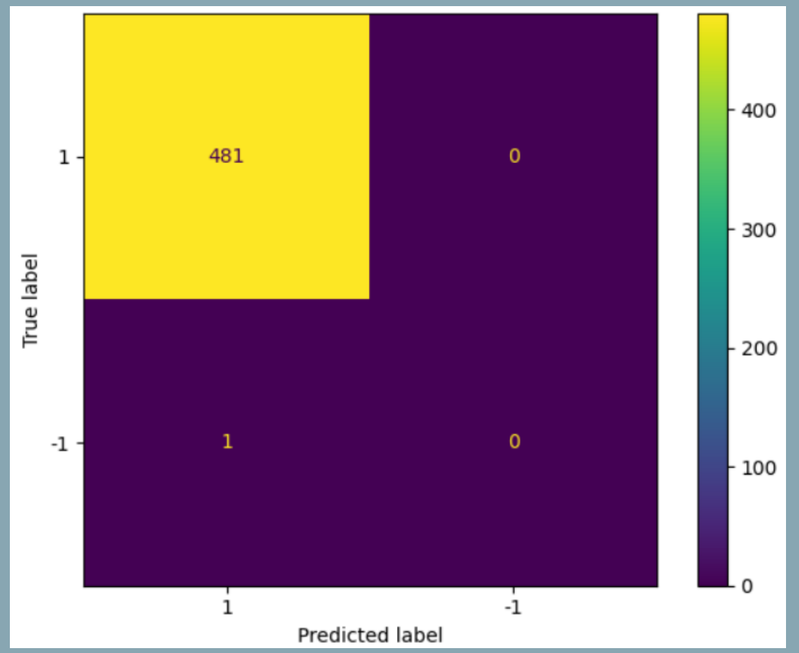
STATISTICAL METHODS TO DETECT ANOMALIES

1. Optimized Z Score
2. Isolation Forest
3. Local Outlier Factor

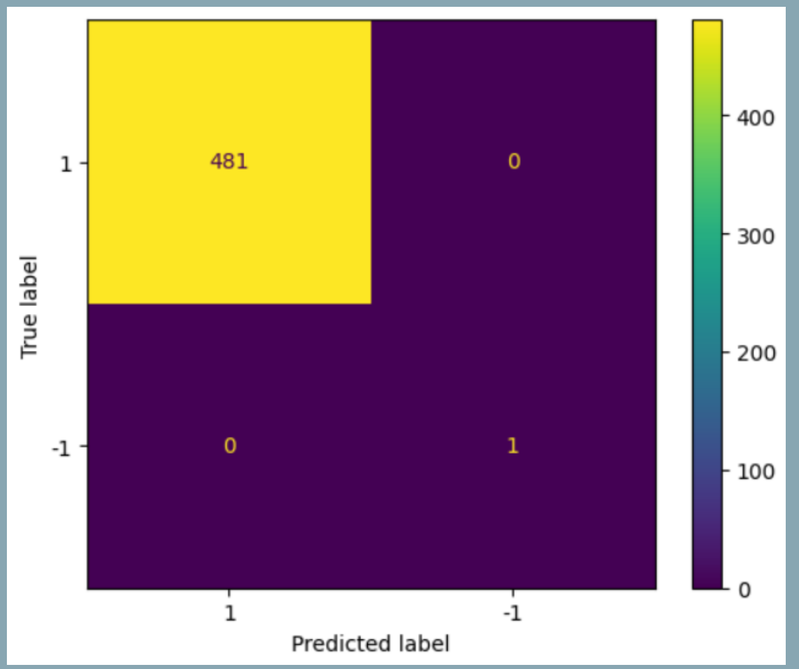
OUTPUT OF ANOMALY DETCTION FOR CPU UTILIZATION DATASET USING STATISTICAL METHODS



USING OPTIMISED Z SCORE



USING ISOLATION FOREST



USING LOCAL OUTLIER FACTOR

REFERENCES

DATASET- HTTPS://WWW.KAGGLE.COM/DATASETS/SUMANTHVRAO/DAILY-CLIMATE-TIME-SERIES-DATA

OTHER REFERENCES:

HTTPS://YOUTU.BE/QY41DXGBAXY?FEATURE=SHARED

HTTPS://YOUTU.BE/OS9XRGKFX4E?FEATURE=SHARED

GIT HUB LINK CONTAINING FILES, DATASETS:

HTTPS://GITHUB.COM/IS-HARSHIT/ANOMALYDETECTION

Thank you!

HARSHIT AGARWAL AND AMRUTHA M