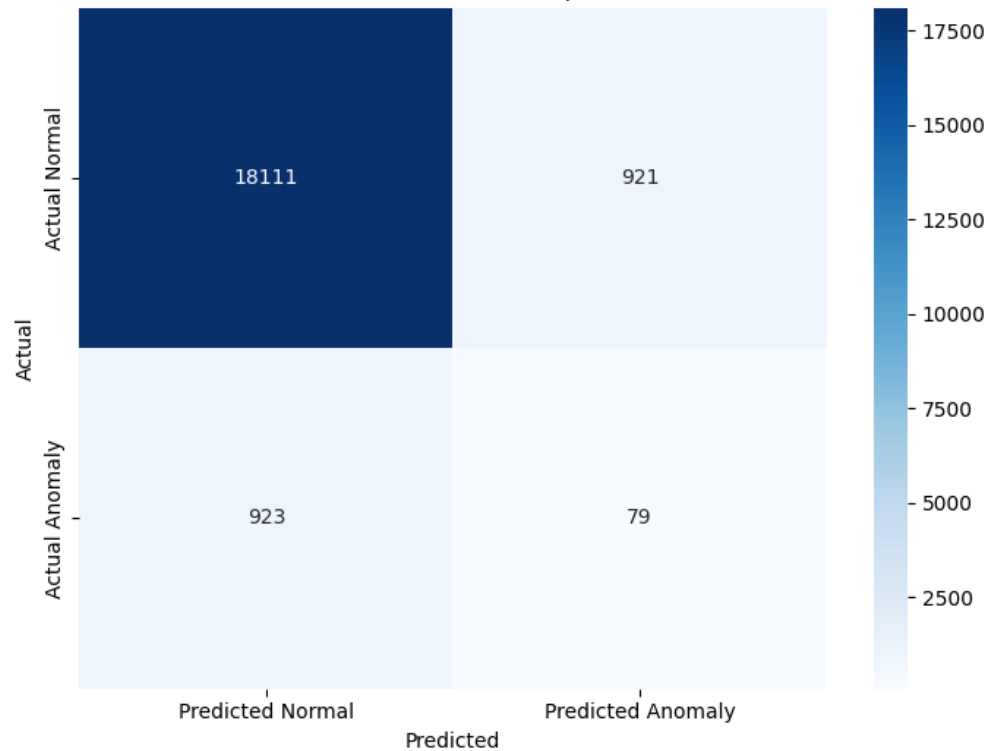


Total: 20034 Correct: 18190 (90.80%)
Wrong: 1844 (9.20%)
Normal → Anomaly (FP): 921 Anomaly → Normal (FN): 923
True Positives (TP): 79 True Negatives (TN): 18111
Accuracy: 90.80% F1 Score: 0.0789

Confusion Matrix with Explanation



We Take a Unsupervised Network Traffic Log Data : sample.csv

Source : <https://www.ccresearch.com/>

Make it leveled using isolation forest Algorithm , like which traffic is 'normal ' or 'anomaly' : classified_traffic_full.csv

About : isolation forest Algorithm



isolation forest algorithm

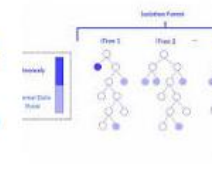


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Isolation Forest is an unsupervised anomaly detection algorithm that identifies outliers by isolating them within a collection of random decision trees. It leverages the principle that anomalies are few and different, making them easier to isolate than normal data points.



Isolation Forest Guide: E Python Implementation

Sep 25, 2024 — Isolation Fo unsupervised machine learni

DataCamp

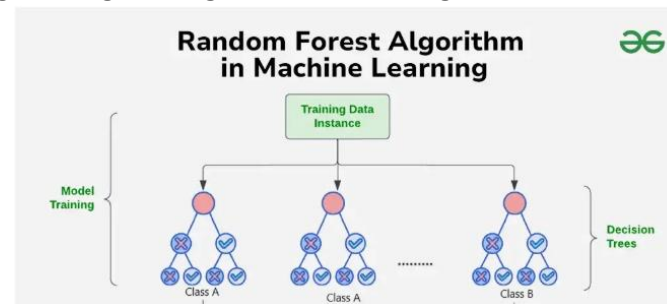
Anomaly Detection Using

Here's a more detailed explanation:

Now with this leveled data , we train a model using Random forest classifier : rf_anomaly_model.pkl

about

<https://www.geeksforgeeks.org/random-forest-algorithm-in-machine-learning/>



After that we tell model to create a prediction on unsupervised data for 'anomaly'



Now it create a leveled data with prediction : test_output.csv



**Then we match the supervised data , with machine leveled data
And calculate the error rate and False positive and False Negative**

