CSCN8010 - Practical Lab 1

Submission Details

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Repository Link:

https://github.com/alicih4n/CSCN8010-Practical-Lab1.git

Project Summary

This project implements a predictive maintenance system for manufacturing robots.
1. Data Ingestion: Streamed sensor data into a Neon.tech PostgreSQL database.
2. Modeling: Performed Univariate Linear Regression on 8 sensor axes to determine trends.
3. Thresholds: Calculated residuals and established MinC (Alert) and MaxC (Error) thresholds based on statistical variance (2-sigma and 3-sigma).
4. Alert System: Developed a real-time monitor that logs events when anomalies persist for a continuous duration (T seconds).