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Team Name
Anomaly Detectors

Problem Statement - JLL Anomaly Detection

Project Description

Based on monthly energy consumption data(at least one year for all buildings), evaluate existing anomaly detection rules, advise on their statistical validity, come up with new rules based on data analysis and potentially pipeline the detection process via SQL.

Data

Monthly utility data from clients (anonymized) which only include public buildings, local benchmark data, consumption per square feet and range data
NYC housing authority back-data - monthly consumption data, but there are potentially multi-family apartments which won't be applicable.
Energy Star portfolio management system for building energy data background information.
Level of granularity may vary in the data.

Potential Problems

- Need to evaluate data completeness: data formatting and input process varies and may affect data integrity; also need to see if we can standardize the way utility data is shared
- Different factors for anomaly - human input error, broken infrastructure, seasonality(to be confirmed if this is part of the model).
- Integration implementation - the team currently only relies on SQL for data processing, need to figure out a way of integrating rules generated from statistical model into SQL.