Forecasting Power Usage: Analysing 2022 for Predicting 2023

Code For India Foundation

November 2023

Problem:

Power utilities lack robust models to estimate future electricity consumption

Solution:

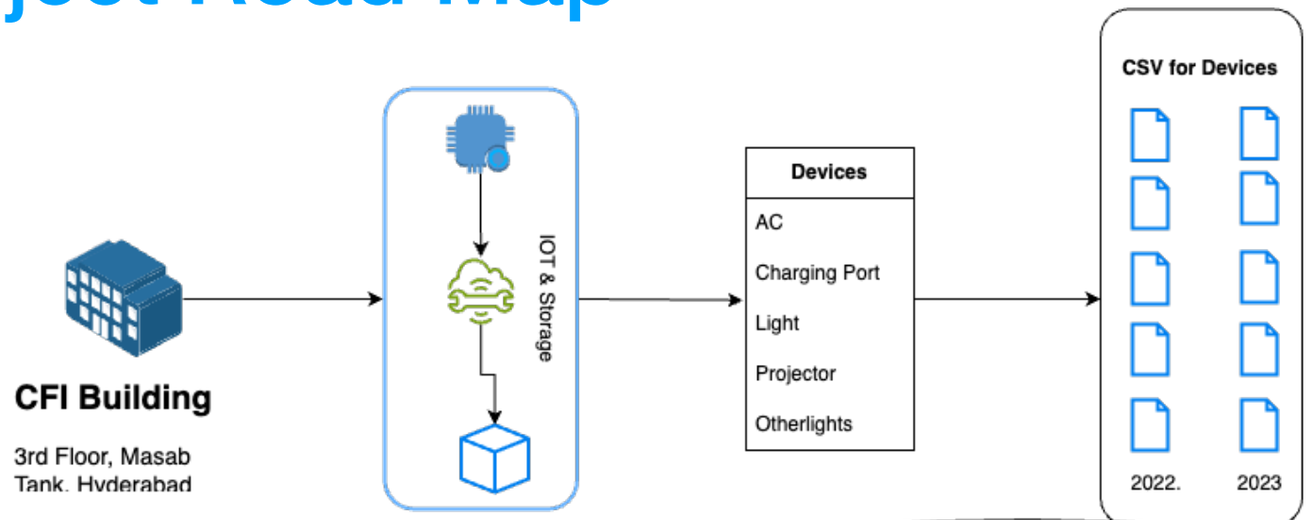
Applying advanced analytics to model and predict 2023 power demand based on insights from 2022

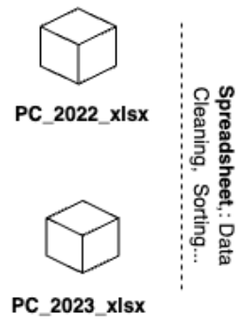
WHY: Power demand fluctuation

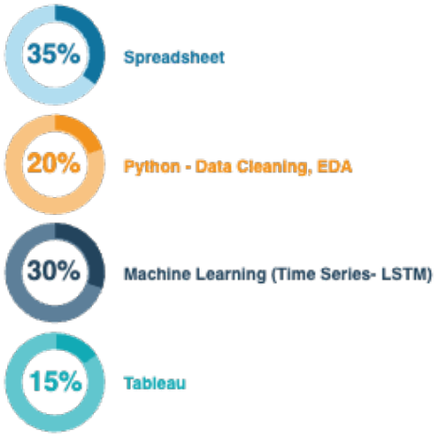
Analytical goals:

HOW: Identify how to leverage insights

Project Road Map







Data Preprocessing

Handled missing values, fixed formatting errors in the 2022 electricity usage data to prepare it for analysis

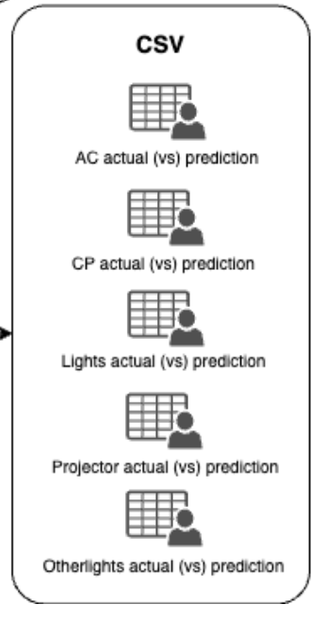
Exploratory Data Analysis (EDA)

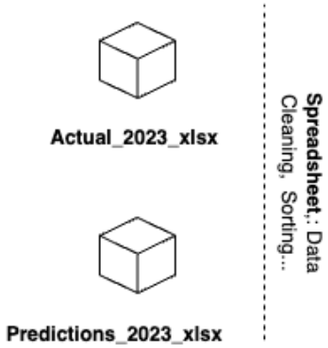
Statistical analysis complemented plots , Visualised usage over time

ML Model Deployment

Time Series: Long Short Term Memory (**LSTM**),
Train with 2022 & Forecast 2023

- Check Error Performance
- Actual (**vs**) Prediction (2023)
- Visualisations





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