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 CSV for Devices 35% Spreadsheet Devices Python - Data Cleaning, EDA PC_2022_xlsx Charging Port Light Machine Learning (Time Series- LSTM) Projector **CFI Building** Otherlights 3rd Floor, Masab PC_2023_xlsx 2022. 2023 Tank. Hvderabad **Exploratory Data Data Preprocessing** ML Model Deployment Analysis (EDA) ➤ Time Series: Long Short Term Handled missing values, fixed Statistical analysis complemented formatting errors in the 2022 Memory (LSTM), plots, Visualised usage over time Train with 2022 & Forecast 2023 electricity usage data to prepare it for analysis CSV AC actual (vs) prediction 🗱 + a b l e a v Actual_2023_xlsx CP actual (vs) prediction Check Error Performance Forecasting Power Usage: . Actual (vs) Prediction (2023) Analysing 2022 for Predicting 2023 Lights actual (vs) prediction Visualisations Predictions_2023_xlsx Projector actual (vs) prediction

Otherlights actual (vs) prediction