Day - 13

Data-analytics Hackathon

Date : 13/07/2025

Duration : 24 Hours

Challenge Brief

The mess hall crowd is highly irregular — some weeks it's overcrowded, others it's underused. This happens despite fixed meal timings and a standard menu cycle. The reasons behind these fluctuations aren't well understood.

You are provided with a dataset that simulates real-world mess usage over time. It includes weekly crowd counts and possible influencing factors like holidays, temperature, menu scores, event intensity, and academic stress.

Your goal is to find the patterns behind this irregular crowding, identify what factors impact it, and design a data-driven approach to predict or manage crowd levels better.

Objective

- Analyze the dataset to understand how and why the mess crowd varies from week to week.
- Identify the most important factors influencing crowd changes.
- Create visualizations and summaries to communicate your findings.
- Build a predictive model or analytical dashboard to estimate crowd levels in future.
- Suggest steps the mess or admin team could take to better manage unpredictable rushes.

General Guidelines

- Use any tools you're comfortable with: Python, R, Excel, Tableau, Power BI, etc.
- Clearly explain your steps and mention any assumptions made.
- **Focus on generating useful insights and a practical solution.**
- This is an **individual hackathon** — team entries are not allowed.
- Submission will closed on same day by 11:59 PM

Deliverables

Submit the following in a Drive folder or Github repository(Github repo preferred):

➔ **Your main working file**, depending on your tool of choice:

- Python/R users: Jupyter Notebook (`.ipynb`) or script file
- Dashboard users: Exported dashboard
- Excel users: Excel file with clear sheets and explanations

➔ **A short report (PDF or PPT)** that includes:

- Summary of your approach and findings
- Key visuals/plots/graphs
- Final insights and recommendations

➔ Link to a **short explanation video** of the PPT or PDF created

Evaluation Criteria

Criteria	Weight
Data understanding & EDA	20%
Quality of insights	30%
Visualizations	15%
Model or prediction logic	10%
Report & explanation	15%
Code/script quality	10%

Additional resources and datasets

Dataset:dataset.csv

-> It contains the following columns:

- `Mess_ID`: Unique ID for the mess
- `Date`: Starting date of each week (e.g., "03-01-2010" = week of Jan 3rd)
- `Weekly_Crowd`: Total number of dinners served that week
- `Is_Holiday`: Whether the week included a holiday (1 = Yes, 0 = No)
- `Temperature`: Average temperature that week in degree Fahrenheit
- `Menu_Score`: Quality/popularity score of the week's menu
- `Event_Intensity_Index`: Campus activity/events level
- `Stress_Level`: Academic workload index during that week

Each row represents **one week's worth of data**.

Support

For any queries, reach out to:

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Name & contact: Sharad Kumar Dubey,8960064987

WhatsApp Community: https://chat.whatsapp.com/CEjhrp1QolYLs1m4OgslMT

Submission

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