

Data Challenge DSW 2023

Student & Junior Professional Category

Problem Statement

A telecommunication company wants to analyze its customer's behavior. Given the following dataset, build a solution that aims to provide meaningful insights to the telecommunication company. The solution can be in the form of an **AI model**, **dashboard**, or **analysis report**. If participants plan to build an AI model, participants are free to decide features, labels, and metrics when building the model. You are expected to propose an **innovative solution** from the dataset.

Dataset Link

<https://kaggle.com/datasets/0912a4f3cb904b0704b7826a288fd8d95cfa677d2a5589336904d05da33d2638>

Dataset Description

The dataset shows the usage of telecommunication services in Q3 of a particular year adapted from a [Kaggle public dataset](#) with several modifications. There are several columns provided in the dataset:

1. **Customer ID** (A unique customer identifier)
2. **Tenure Months** (How long the customer has been with the company by the end of the quarter specified above)
3. **Location** (Customer's residence - City)
4. **Device Class** (Device classification)
5. **Games Product** (Whether the customer uses the internet service for games product)
6. **Music Product** (Whether the customer uses the internet service for music product)
7. **Education Product** (Whether the customer uses the internet service for education product)
8. **Call Center** (Whether the customer uses the call center service)
9. **Video Product** (Whether the customer uses video product service)
10. **Use MyApp** (Whether the customer uses MyApp service)
11. **Payment Method** (The method used for paying the bill)

- 12. Monthly Purchase** (Total customer's monthly spent for all services with the unit of **thousands of IDR**)
- 13. Churn Label** (Whether the customer left the company within a time period)
- 14. Longitude** (Customer's residence - Longitude)
- 15. Latitude** (Customer's residence - Latitude)
- 16. CLTV** (Customer Lifetime Value with the unit of **thousands of IDR** - Calculated using company's formulas)

Scoring

In the preliminary round, your result will be scored based on these qualities:

- Originality
- Method suitability to the problem provided
- Impact

In the final round, in addition to the aforementioned scoring criteria, the presentation will also be evaluated.

Solution Submission

- Alongside with the solution, participants are required to submit a PowerPoint presentation file in the format of:

1. Title

A short title describing the issues raised and the solutions provided.

2. Team Introduction

Team name and the educational and professional background of the team members.

3. Introduction

The background of the topics and issues raised, including the urgency and importance of the issues.

4. Data & Methodology

An explanation of the datasets, steps, and tools used to analyze and solve the problems.

5. Results

A set of essential findings from the analysis, including metrics (if any).

6. Conclusion

Analysis summary and solutions proposed for the raised issues.

- Participants must follow the submission format as follows:
“DataChallenge_(Team Name).zip”. The .zip file consists of the **PowerPoint presentation file** and the **solution** to the given topics and datasets. For example, if the solution is in the form of a public Tableau dashboard, participants may mention and attach the link to the public Tableau dashboard in the PowerPoint presentation file. Participants may also attach the solution in the zipped file if the solution cannot be accessed via a public website.
- Final submission must be uploaded to this submission link: <https://bit.ly/SolutionSubmissionDSW>.
- Participants are allowed to change or update their solutions until the registration closes on **12 November 2023 at 11:59 PM (23:59) GMT+7 (Jakarta Time)**.