



RAILWAY TICKET ANALYTICS FOR BUSINESS INSIGHTS

An approach to analyze the historical sales data to depict business insights that can help to strategize business operation strategy. The process involves data preparation, data transformation, and data visualizations.

INTRODUCTION

To introduce the analytics solution for KTMB project. KTMB, largest railway company in Peninsular Malaysia. With urbanization, public transit has become one of the finest modes of mobility for those living in densely populated areas. The needs for efficient transportation are crucial to attract more people to make use public transport, hence studying the passenger behavior is the key to business operation and marketing strategy.

PROBLEM BACKGROUND

KTMB launched KITS, a new online ticketing system for purchasing train tickets online. Since KITS is a new system, only production environment available and there is no analytics environment. In addition, the current system for reporting and monitoring the railway tickets is performed in conventional way, that is manual extraction from the system and the reports will be distribute via email.

OBJECTIVE

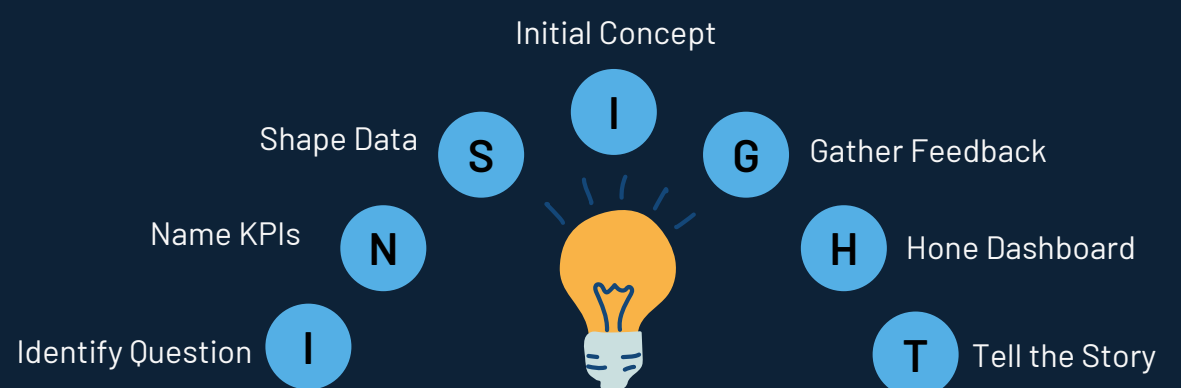
- To study the train business operation to have better understanding for the railway ticket analytics dashboard.
- To perform data preparation on raw data prior to processing and analysis for railway data modelling.
- To build and design railway ticket analytics dashboard highlighting important metrics in terms of passenger behavior.

CONCLUSION

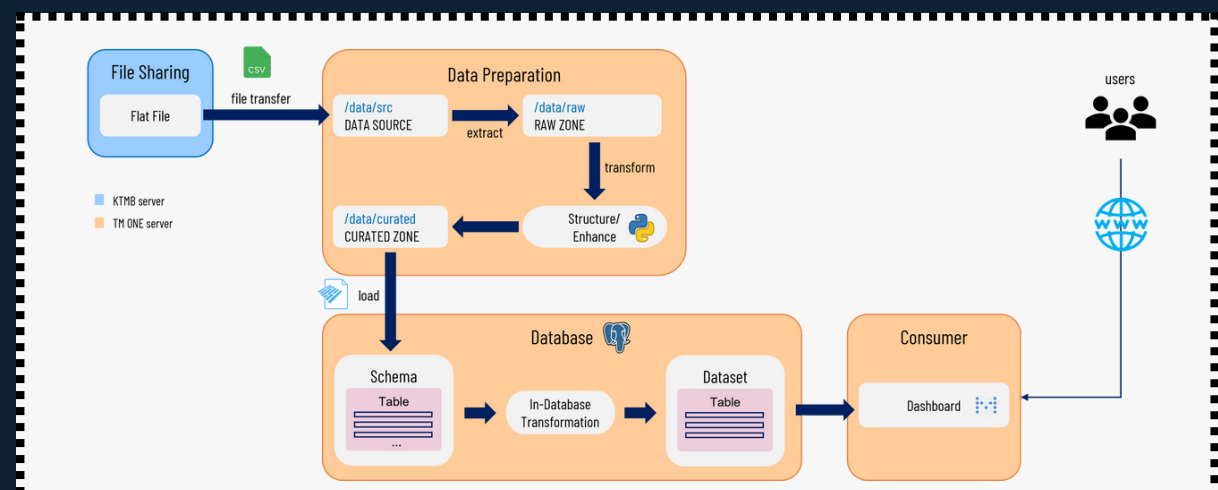
Suggestion future works:

- Advanced chart with features forecasting or prediction.
- Automate data pipeline using scheduling tools like AirFlow.
- Map visualizations by adding latitude and longitude of train station stops.

METHODOLOGY

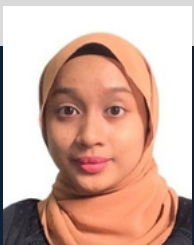
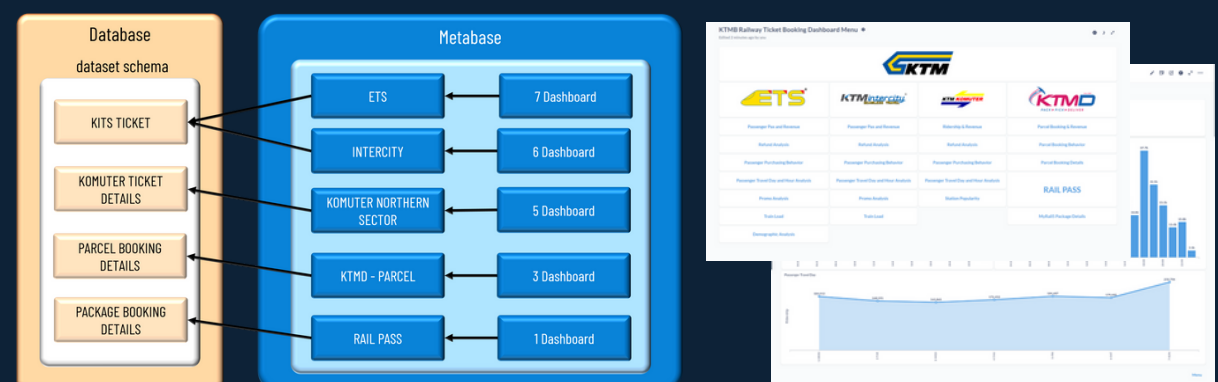


IMPLEMENTATION



RESULT

There are 22 dashboards with one main menu were built and divided into 5 module that is ETS, Intercity, Komuter Northern Sector, KTMD - parcel, and Rail Pass. Each dashboards depict the passenger behavior in terms of purchasing and travelling.



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