**Retail Analysis**

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## 1. Project Motivation

**In this project we focused retail analysis with App data and answer the following questions:**

1. “*daily\_logins*” which contains the number of logins on a daily basis
2. Daily trend of logins and trend of conversion rate (Number of orders placed per login)
3. Which KPIs would you use to measure the performance of our app?
4. report regarding our growth between the 2 years
5. What are our top-selling products in each of the two years? Can you draw some insight
6. Looking at July 2021 data, what do you think is our biggest problem and how would you recommend fixing it?
7. Does the login frequency affect the number of orders made?
8. Give at least 2 insights that are not mentioned above and are not clearly visible from the data.

## 2. Installation

* SQL

## 3. Data

There are retail data available of APP. This is the data that covers retail in 2021-July to 2022 July

## 4. Implementation

In this project, we used [SQL](https://scikit-learn.org/stable/modules/generated/sklearn.ensemble.RandomForestRegressor.html) and Power Query to Analyse the Data.

## 5. Result

The details of the results show in the code, insights & Dashboard.

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**SUMMARY**

Based on the data that we have obtained through SQL queries, we can conclude that:

1. **App performance increased significantly in the 2022 year**, as seen from the value of sales and No of orders which increased by **24.6%** and **30.5%**
2. **The acquisition of new customers is very good,** and increased compared to the previous year.
3. **The interest of new customers to shop old products is loosed**. It is recommended that the Product team need to study customer behaviour and make product improvements, so that the conversion rate (register to transaction) can increase.
4. **Products categories 12547 and 10235 contribute highest of total orders in 2022 & 2021**, so App team should focus on developing the **12547 and 10235** categories.
5. **App product order retention rate is low at only** meaning that many customers who have transacted in the 2021 year do not return to place order in the 2022 year (no repeat orders).
6. **App experienced positive growth in the 2022 year and needs to make a lot of improvements both in terms of products and marketing business,** if it wants to achieve its target and positive growth in the 2023 quarter.
7. **The low retention rate and conversion rate can be an early diagnosis that customers are not interested/unsatisfied/disappointed in shopping at that App.**