

Company Background

Far East Flora Market was founded in 1965 and is a subsidiary of Far East Flora Holdings. It is a wholesaler that supplies a wide range of fresh cut flowers, foliages, floral accessories and dried flowers etc. Its customer base includes the general public, florists, religious organisations and event planners.

Problem Statement

With the aim to maximize its delivery capacity for efficiency, Far East Flora Market commissioned the SMU students to leverage data analytics skills to forecast, visualize and provide future suggestions.

The company is currently relying on 2 in house lorries & 3 regular couriers for its deliveries, which is not enough to deliver large number of orders during festivals. In addition, due to the uncertainty of the intake of orders, Far East Flora Market thus is unable to provide external couriers an estimate on the no. delivery orders. As a result, the external couriers are reluctant to establish long term partnership with them. On top of that, the external couriers will charge Far East Flora Market at a higher rate for last minute services.

Thus it is necessary to forecast the order intake during festivals and facilitate the delivery process.

Process and Results:

Alliance of Knowledge

Meet up with client for the base knowledge of the company and to alliance our understanding on the problem

Data Cleaning

Ensure accuracy: Base data to be clean and to be suitable for data analysis using loop and excel functions

Linear Regression

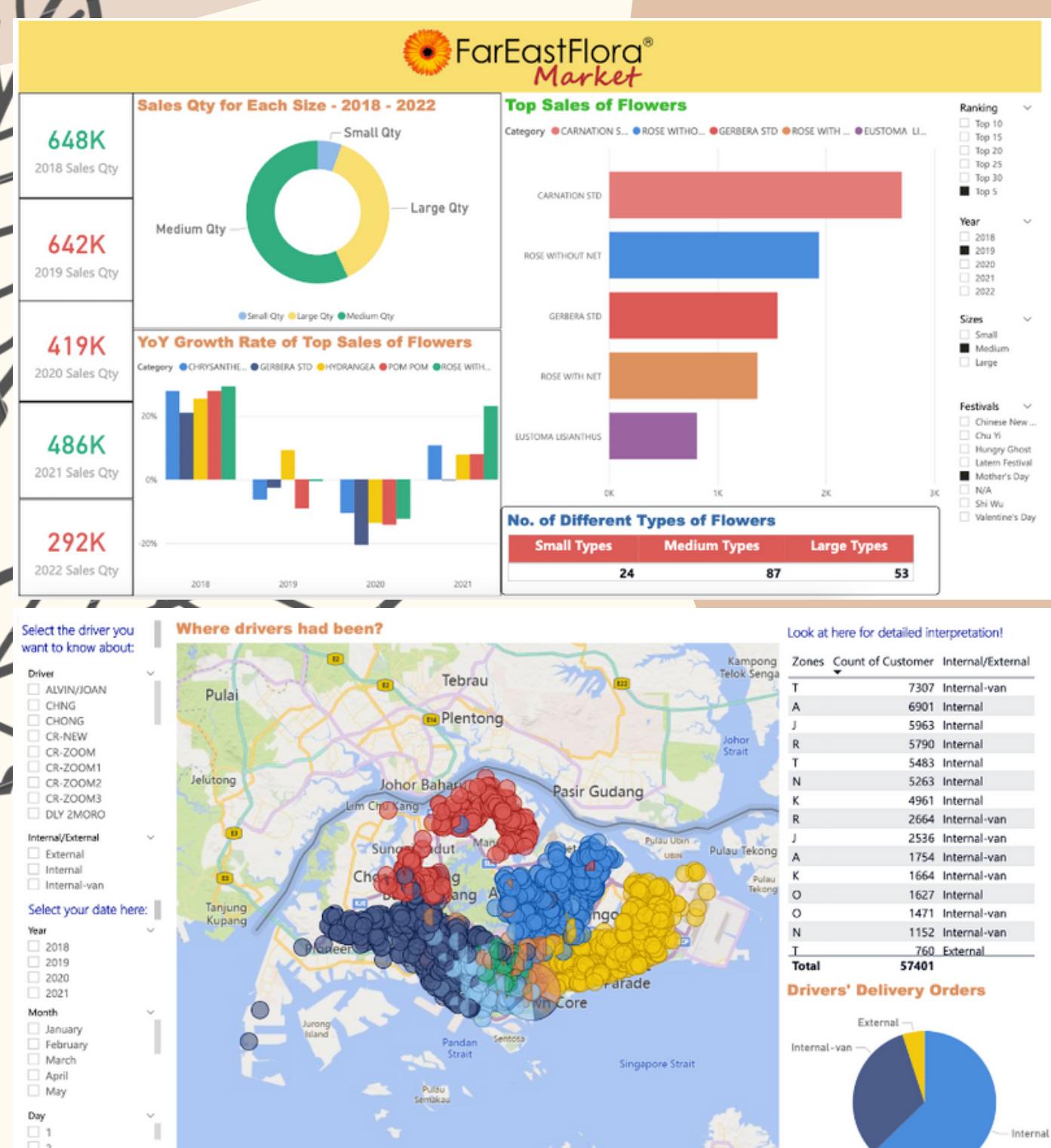
Provides certainty: linear regression models and time series model are able to validate their domain knowledge, usage of lag and first difference models for each festival to find the best predictive models

Optimization model

Maximize productivity: Optimization model based on the number of orders respective to the capacity of the individual driver, different months and festivals are taken into consideration for better user experience.

Dashboard

To provide better understanding of business situation and trend, provide a direction for business planning at a glance using power Bi



Management Dashboard:

Type of flowers analysis

Discover different type of flower's sales trend

Route analysis

Discover the trend of driver's delivery route for the optimization of route planning efficiency

Driver analysis

Discover the active level of drivers and their maximum capacity to better allocate resources

Customer analysis

Discover the top customers and their trend of purchases.

Zone analysis

Discover the popular zones and thus aid in resource allocation

Recommendation:

Collection of data

To improve and standardize the data collected

Big data management

Find a way to link customers and how many flowers are delivered to them instead of just record it as line items

Reflection:

The project provides student with a hands-on experience on a real world situation. Students are able to leverage their analytical ability together with strategic thinking to provide suitable solutions for client. This is a journey that reveal the world outside of the university, with the strategic thinking skills picked up throughout the project, students are more able to adapt to different type of projects in the future with ease.