

Observations about datasets

Note: All of these observations are for the dates provided in the dataset

BI Category

Revenue and Orders count

- > Weekends are the most busy time for CK with orders peaking on Saturday.
- > Weekends contribute to 52% of total revenue with Friday contributing ~\$506K or ~15% of total revenue, Saturday contributing ~\$679K or ~30% of total revenue and Sunday contributing ~\$634K or ~18% of total revenue. Not surprisingly, the same trends are seen in order counts as well.

Top service providers

- > Of the three delivery service providers, SuperEats is the provider with most deliveries (52.6K or about 60% of the total orders)
- > In terms of revenue, SuperEats was responsible for \$198K or 58% of total revenue from ordered items

Operational

Peak Hour Traffic

- > For weekends and weekdays, peak orders occur between 11 am - 1 pm and 8 pm - 10 pm.
- > For weekends, lunch peak hours result in ~ 31% of total orders and dinner peak hours result in ~29% of total orders

Optimum Number of cooks

- > This metric (Optimum Number of cooks) is a key operational metric that determines the lag between when an item is ordered and when it is delivered.
- > Mechanism to determine this is based on an agreed upon SLA with the delivery partner i.e. what is the time by which we have agreed to deliver the food item to the delivery partner.
- > This optimum will shift from peak hours to non-peak hours and assumes that none of the meals are pre-cooked i.e. all meals are prepared from scratch.
- > I did some analysis on peak hour slot. Consider the example of the most in-demand slot during the week. Based on the dataset provided, this is on Saturday between 8 pm - 9 pm. During this slot, CK produced ~1600 items and based on duration to cook for these items, the aggregate total duration needed to cook all these items is 14.3K hours. Average duration to cook each item for this hour is at ~ 9 minutes.

> If we had 50 personnel cooking simultaneously during this slot and assuming the average duration to cook an item is 9 minutes, the total deliveries will be ~ 330/hour $((60 \text{ mins}/9)*50)$.

This is way below the total seen during this time slot ($330 \ll 1600$)

> If we had 150 personnel instead of 50, we'd deliver ~ 1000 items which is still lower than 1600 items.

> If we had 300 personnel, then we'd be able to deliver all the items and also, reduce the average cook duration to ~7 minutes. Math is total aggregated duration to cook meals divided by average duration $(14327/(60 \text{ mins}/9)*300 \text{ cooks})$