

Touchbistro Problem Set #1

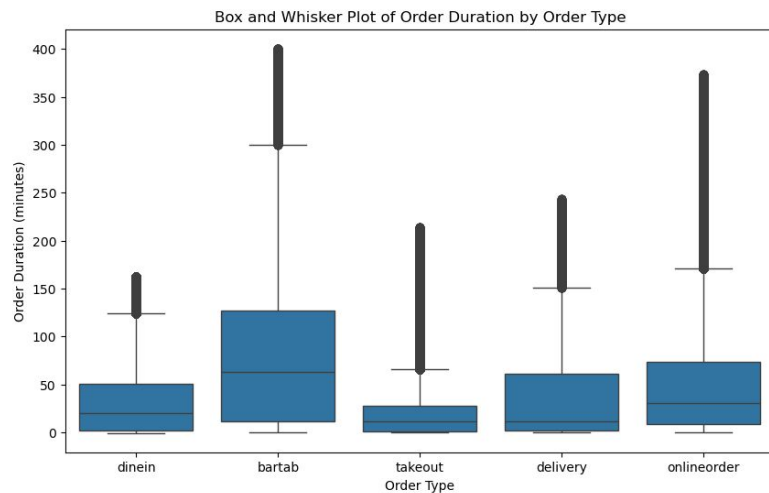
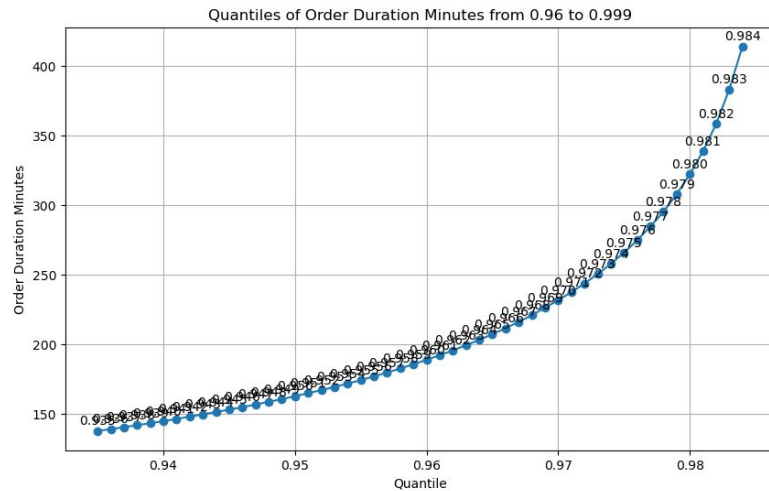
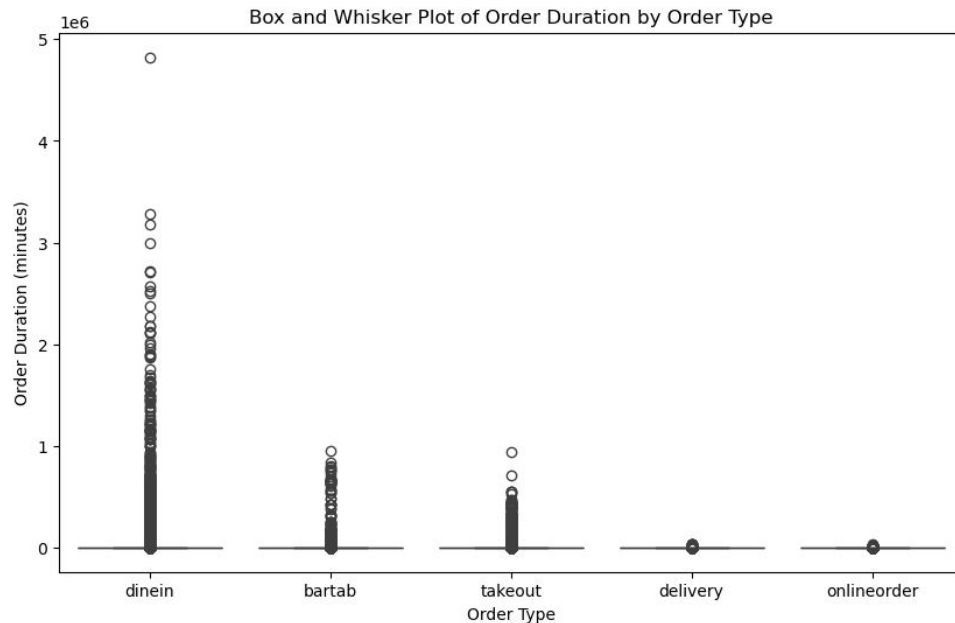
Nathan Lu

Problem Statement: Peak Staffing Levels?

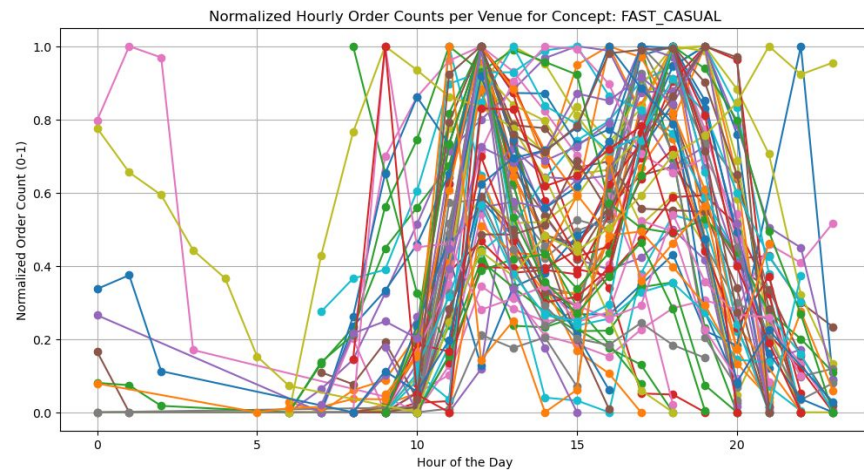
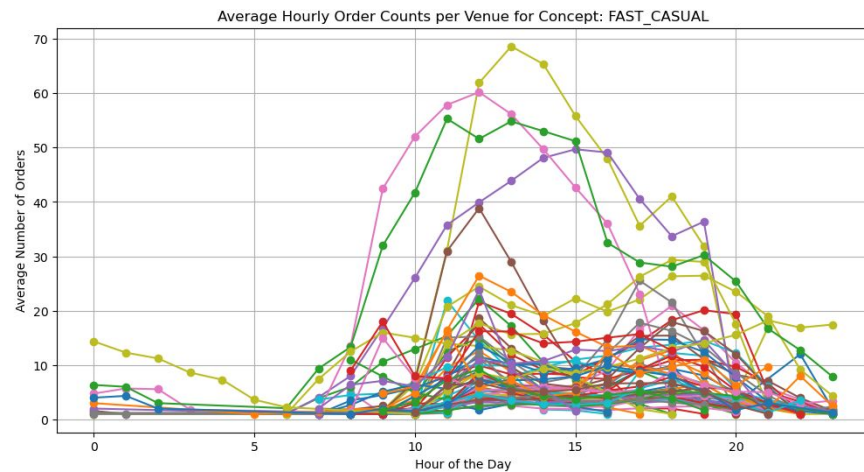
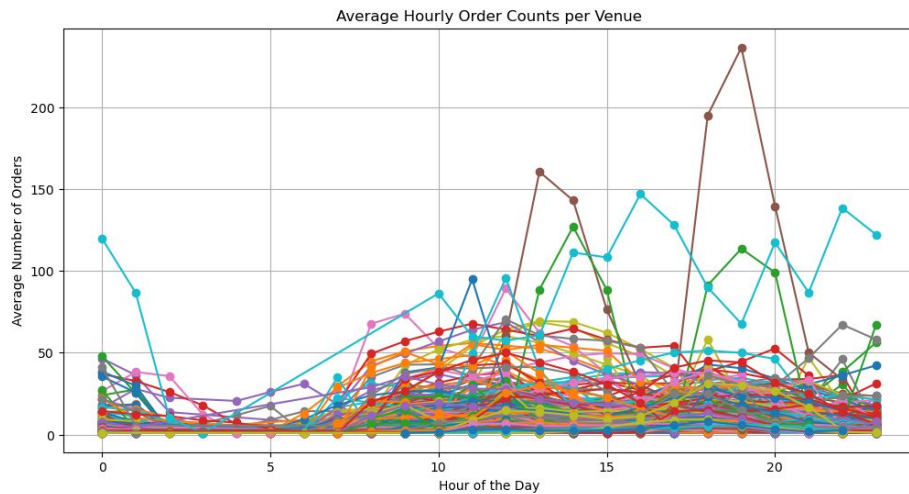
Approach:

- Find the order duration and the timestamp of each order
- Aggregate the number of orders and their overlap in a time-series format
- Normalize the order severity for each venue to determine peak staffing levels
- Identify the peak staffing levels through segmentation methods

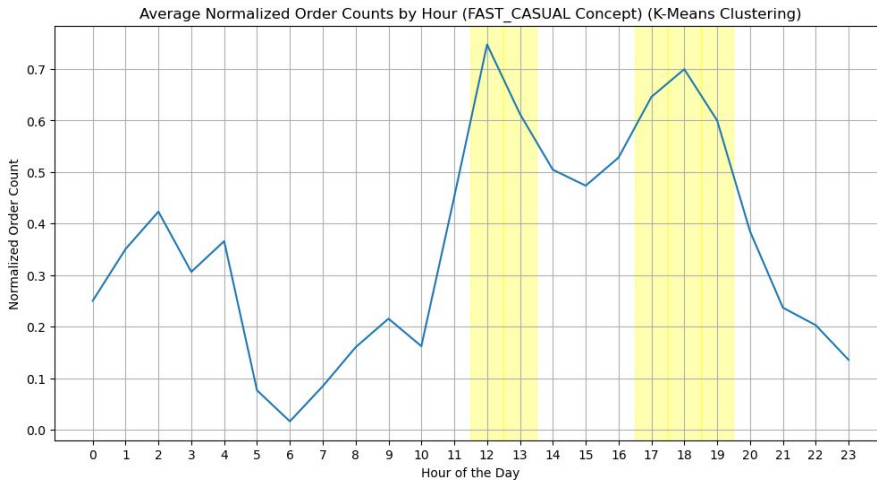
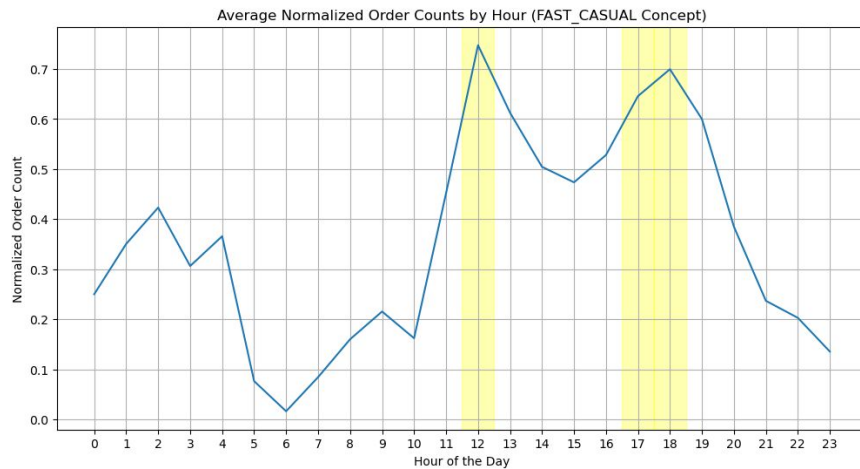
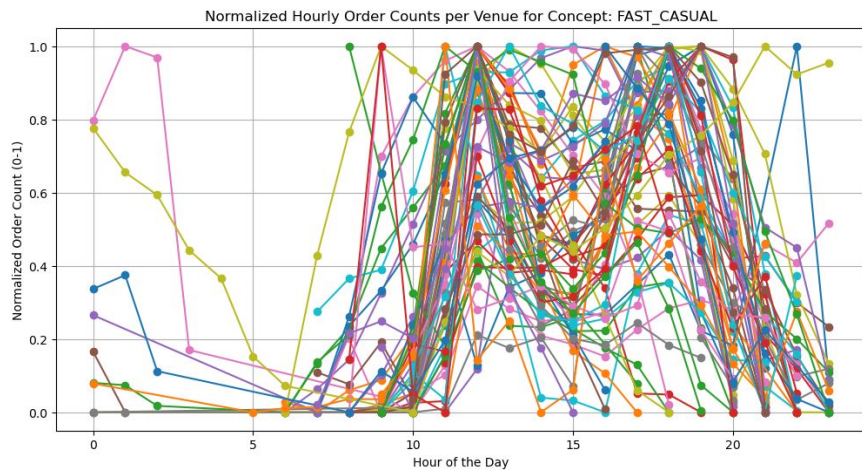
Pre-Processing & Cleansing



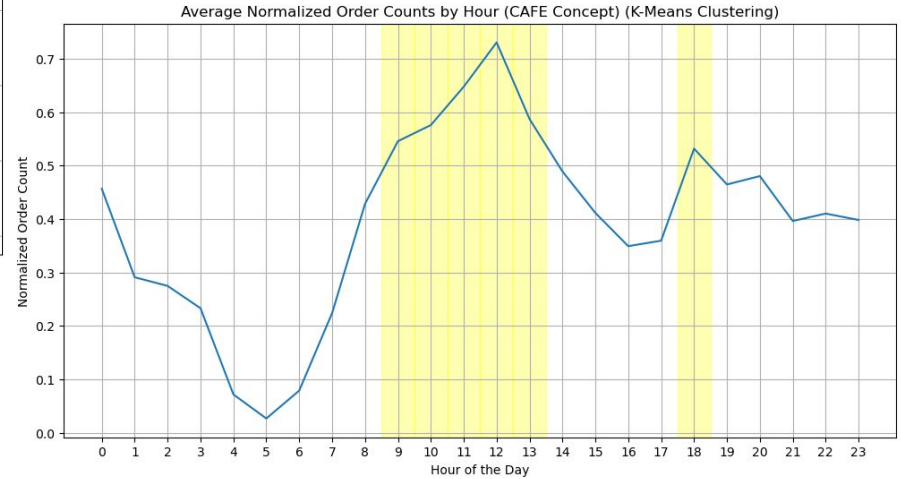
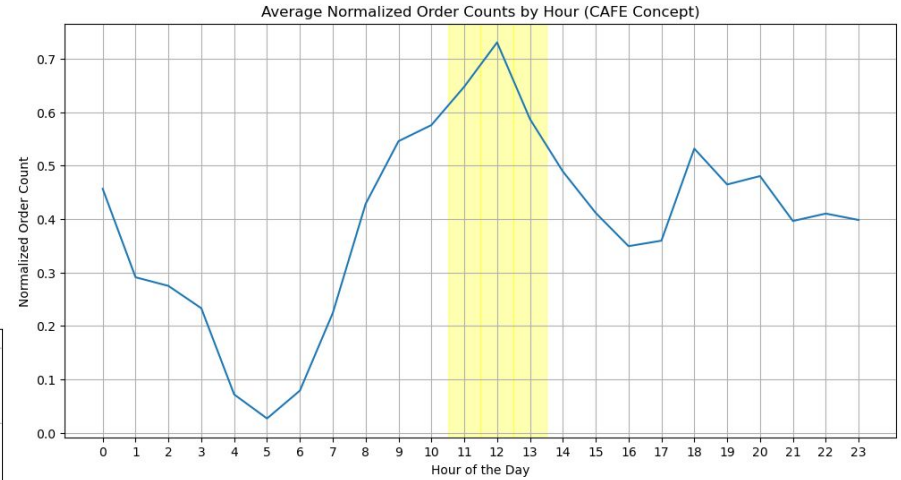
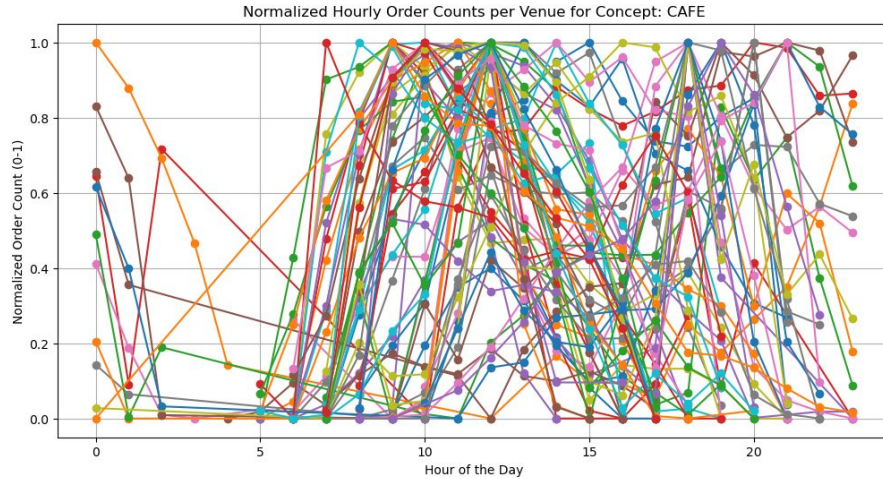
Aggregation



Segmentation



Final Conclusion



What's Next?

- Incorporating time-based weighting for each order based on order type and duration.
 - For example, during a dine-in order, the server is usually attending to the table while taking orders and handling the bill. However, there is less attention to that specific order during the middle phase.

