Utkarsh Nigam, DATS 6401, Summer 2020

Project Proposal

## **Impact of Holiday Season 2019 on US Online Retail Sales**

**Introduction**

As per [Forbes Report](https://www.forbes.com/sites/bryanpearson/2016/12/22/holiday-spending-to-exceed-1-trillion-and-11-other-surprising-data-points-of-christmas/#7748f391247f), total holiday sales in USA exceeded USD 1 Trillion in 2016, which is roughly 5% of the US GDP and more than 2/3rd US citizens shopped on these days. But do the businesses actually plan well ahead of time to prepare themselves for the two-month shopping extravaganza. With retail industry being the most holiday sensitive, it’s interesting to gather some insights from 2019 online sales data and take a look at how this industry moves during the holiday season.

**Objectives**

The primary objective of this project is to learn customer patterns & trends, through visualization of the 2019 online sales data, which can help derive actionable insights to create a truly unique and differentiated customer experience this year. The approach would be to analyze the performance of non-holiday months i.e. January till October and compare them with holiday months i.e. November-December. Through this the answer to some of the prominent questions such as which product categories get maximum lift during holiday season? Which states contribute the most revenue during holiday season? Also, understanding the impact of mobile on the holiday season and try to forecast revenue for this year looking at previous years trends. The retail sales data for this project will be taken from [Kaggle](https://www.kaggle.com/mkechinov/ecommerce-behavior-data-from-multi-category-store).

**Proposed System and Platform**

The project will be presented in the form of an HTML webpage with CSS. The visualization for this project will be created with D3.js and Google Charts visualization library. Data cleansing and preprocessing will be done using Python.