Sprint 0

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An area of interest for me is hospitality, specifically: Restaurants. A challenge a restaurant could face is the cost of waste associated with their menu items. How can we reduce waste based on historical data of the restaurant to increase or maximize profits? My project intends to address the amount that the restaurant should produce based on a variety of factors that might allow us to identify the production needed for each day.

Restaurant owners would benefit from a waste reduction model as it would maximize their profits by reducing the cost of un-consumed materials. If restaurant owners would like to expand within the food and beverage realm within hospitality they can use this model to plan and ensure they can start making profits.

By using machine learning, especially time series models, restaurant owners can benefit from predicting their production values for everything on their menu and driving down the cost of unconsumed items. This would allow restaurant owners to prepare for their most purchased item to its least purchased item. It is important to note that there are multiple ways of using Time Series models to produce a beneficial impact within a restaurant. These could be other alternatives that can be explored using the same dataset (e.i forecasting profits, clientele, etc.)

The dataset for this area of interest includes the following columns: date, quantity sold, waste quantity, weather, temperature, and the money that was collected during that day. The data comes from the restaurant chosen for this specific project. The data can be found using the following ***link***.

Alternative areas of interest include creating a recommendation system that would produce the dimensions needed for a solar panel to drive the electricity for the desired purpose. Homeowners or business owners can benefit from having a model that could predict the dimensions of their solar panels to employ a renewable energy source for their respective addresses. This could impact creating a greener society and potentially benefit the users monetarily, as in some states if not all, homeowners are rewarded for the consumption of renewable energy sources.

We could use data on Solar Energy Production (or another source related to solar energy data production) and combine that with information regarding dimensions and use which might have to be filled out manually based on the values in the data set. It is worth noting that a little bit more research needs to be done to find and combine data sets appropriately.