**PROJECT PROPOSAL**

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**Group Number** – 1

**Topic** – Data visualization of diet patterns and their effects using Tableau

**School** – University of Massachusetts Boston

**INTRODUCTION:**

In recent times, there has been a global cry over the rising non-communicable diseases. The underlying issues seem to be obesity and diabetes.

Though USDA and WHO have been setting dietary guidelines, they have yet to be addressed. Manufacturers deceive people using loopholes in marketing policies. Increased sugar consumption, vegetable oils, and processed food have been directly linked to all the recent health issues.

We can also infer from the recent COVID pandemic, where mostly obese and diabetic people lost their lives.

**PROJECT GOAL:**

The goal of the project is to address the issue of poor diet with the 2020 diet dataset, and how, by following the USDA Center for Nutrition Policy, we can avoid obesity and undernourishment.

USDA recommends a simple daily diet intake guideline: 30% grains, 40% vegetables, 10% fruits, and 20% protein. It is our responsibility to make the necessary changes to protect our loved ones. Limiting our added sugar and hydrogenated oils is the way forward.

**DATASETS:** We have used datasets from Kaggle.

<https://www.kaggle.com/datasets/mariaren/covid19-healthy-diet-dataset>

<https://www.kaggle.com/datasets/rinichristy/countries-gdp-19602020>

There are four different datasets, like % of protein consumption, % fat consumption, and consumption of food items with respect to kcal and with respect to kilograms, across the world. In addition to these, the GDP of each country will also be incorporated along with the above datasets. From the data, we can also see how COVID-19 has impacted people following unhealthy diets. We are meant to follow a balanced diet based on the USDA dietary guidelines. As we are not abiding by those guidelines, we can observe an increase in obesity and undernourishment percentages.

**TARGET AUDIENCE:**

This project caters to general public. The visualizations we get as part of this project can be used to create awareness about how an unhealthy diet is a huge problem that cannot be ignored.

**QUESTIONS:**

**1. What are the current diet patterns across different countries?**

Descriptive: How do food supply quantities in kilograms vary across countries for different food categories?

Predictive: Can we predict the future trends in food supply quantities and diet patterns based on historical data?

Prescriptive: What dietary changes can be recommended to countries with a high level of undernourishment?

**2**. **How do diet patterns relate to health outcomes and obesity rates in different countries?**

Descriptive: Are there significant correlations between diet patterns and undernourishment rates?

Predictive: What will be the future health outcomes on obesity rates based on current diet patterns and other demographic factors?

Prescriptive: How can countries with high obesity rates use data-driven insights to develop targeted public health interventions?

**3.** **How do diet patterns and their effects relate to the economic well-being of different countries?**

Descriptive: How does the prevalence of obesity and undernourishment vary across countries and how is it related to their GDP?

Predictive: How will shifts in diet patterns impact a country's economic health, and can we forecast these changes?

Prescriptive: How can countries with low GDP levels use data-driven insights to make dietary and economic improvements?