What's Driving the Vegan Trend?

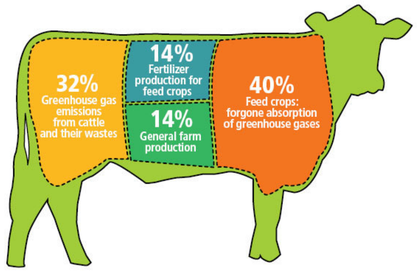
DH 100 Theory and Methods, Summer 2021 | Instructor: Adam Anderson | Student: Seunghye Jeon | 2021. 06. 20

Introduction:

Humans are omnivores, and animal meat provides many nutrients that humans need that are not available in plant sources (Bhat 2010, 125). According to Bhat, “[m]eat is specifically valuable as a source of omega-3 fatty acids, vitamin B12, protein and highly bioavailable iron (Bhat 2010, 125).” Therefore, meat is a significant food source for human which helps to keep better physical and mental health, and the demand for the meat is keep increasing. However, the increased meat production and consumption also have some adverse effects on the environment and human health. Since the environmental problems caused by the meat production is coming up as an issue nowadays, many people are trying to organize their diet with plant-based ingredients instead of animal meat. In this project, I would like to identify the effect of meat consumption to the environment and human health and the current trend of vegetarianism.

Questions to Explore:

1) How does the meat production affect the environment?
2) How does the meat consumption affect the human health?
3) What is current trend and movement of the vegetarianism?

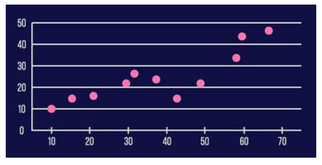


Dataset:

1) Environment Impact of Food Production (csv file)
2) WORLD DATA by country (csv file)
3) Meat Supply Per Person (csv file)
4) Country Health Indicators (csv file)
5) COVID-19 Healthy Diet Dataset (csv file)
6) Vegetarian and Vegan Restaurants (csv file)

Description of Method and Analysis:

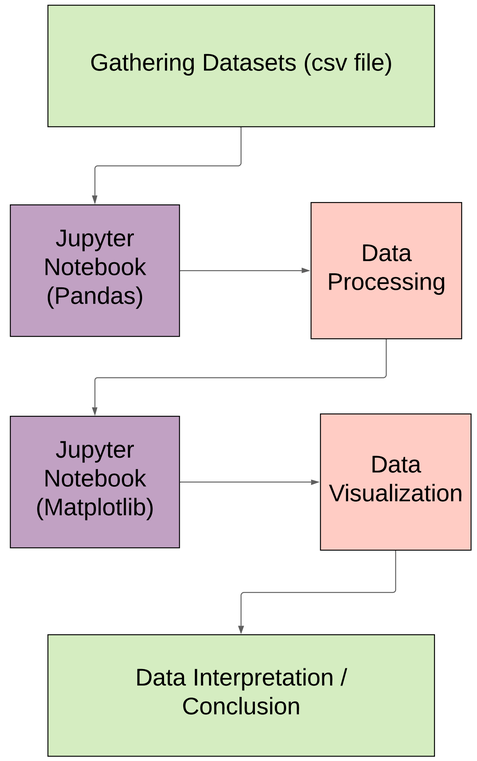
1) **Data Gathering**:
Gather the relevant datasets from the Kaggle
2) **Data Processing / Cleaning / Filtering**:
Process the data to make them fit the purpose of exploration questions utilizing Pandas in Jupyter Notebook. Join the datasets that are relevant and drop the columns from the datasets that are not necessary for this project.
3) **Data Visualization**:
Create the visualization based on the processed data. Bar Plot can be used to visualize how the meat production affects the various aspects of environment. Bar Plot can also be used to compare the meat consumption and health status of people in each country. This data can also be visualized by scatter plot to show the correlation between the meat consumption and the human health. Maps can be used to show the distribution of vegetarian ang vegan restaurants. Visualization of the data can help us to understand the large-scale data at a glance.



4) **Data Interpretation / Conclusion**:
With the data cleaned and visualized, it is possible to draw the conclusion of the project.

Interpretation / Conclusion:

This part will be elaborated more later, after interpreting the data. For now, the hypothesis I have for this project is that meat production and consumption causes adverse effect to the environment and the human health. Many people are recognizing these adverse effects so that current trend of vegetarianism is rising. However, since there are some nutrients that we can gather from meats, we should consider the way we can continue sustainable diet with healthy and environmental-friendly ingredients.



Works Cited:

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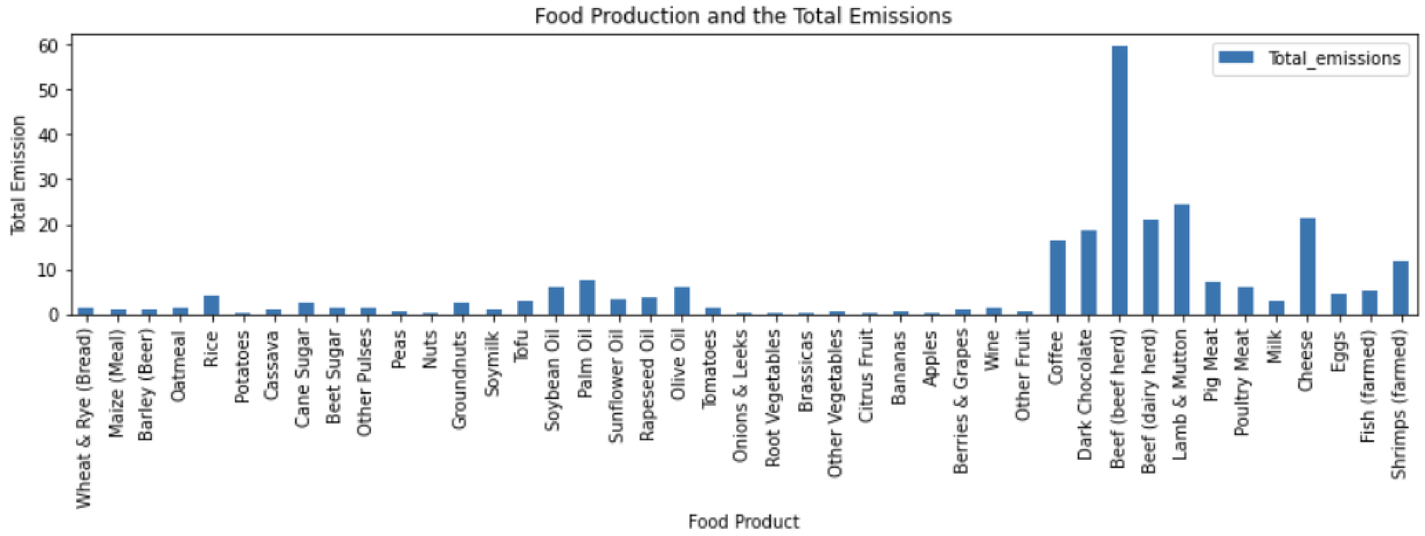
7) Datafiniti. "Vegetarian and Vegan Restaurants." Kaggle (2018) https://www.kaggle.com/datafiniti/vegetarian-vegan-restaurants
8) https://proveg.com/wp-content/uploads/2018/04/Foodplate.jpg
9) https://ecologise.in/wp-content/uploads/2015/12/meat.jpg
10) https://www.configuratori.com/wp-content/uploads/2020/10/Data Visualization.jpg

Environment Impact of Meat Production:

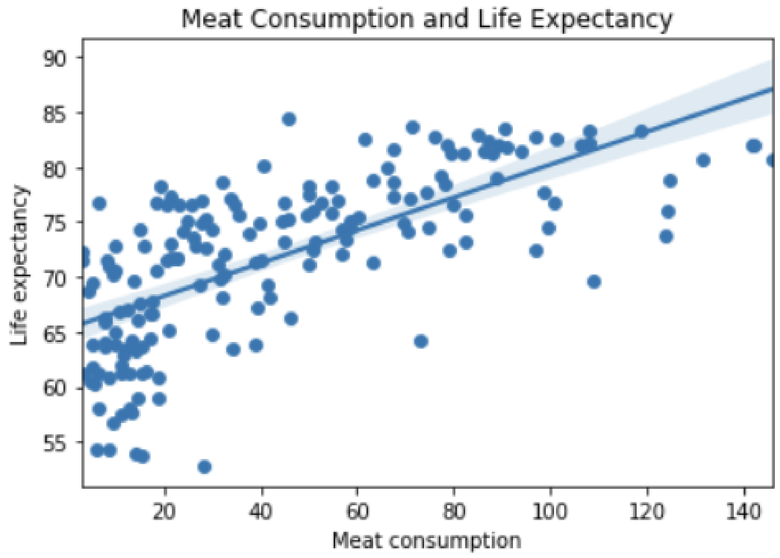
In this part, I utilized the "Environment Impact of Food Production" dataset to compare the total emission occurred by the food production. The visualization on the right shows that the total emission of greenhouse gas is significantly higher for meat products compare to the plant products.

(more interpretation and visualization will be added)



Human Health Impact of Meat Consumption:

In this part, I utilized the "Meat Consumption," and "Life Expectancy" dataset to identify the human health impact of meat consumption. I joined two datasets and created scatter plot with regression line to identify the correlation between the meat consumption and the life expectancy. My hypothesis was the country with more meat consumption will have shorter life expectancy. However, the country with more meat consumption had higher life expectancy. Since life expectancy is influenced by various factors, I thought I will have to find other source that shows the health status of people.



Current Trend and Movement of Vegetarianism:

In this part, I utilized the "Vegetarian and Vegan Restaurants" dataset and identified the type of vegan restaurants in US. There were more than hundred kinds of cuisines and I sorted top ten cuisines for the visualization. Among the vegan restaurants, Indian Restaurants were the most number of Indian restaurants, followed by Chinese Restaurants and Smoothies and Juices.