Waste and Pollution

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GitHub Portfolio: https://knmoses.github.io/

Which Domain?

The domain in which the data is coming from is Government, more specifically the U.S. Environmental Protection Agency. The additional sources will be used for more information regarding facts about plastic waste and the amount of it out there.

7 Easy Ways to Reduce Plastic Waste. (2016, September 30). Retrieved from https://www.keeptruckeegreen.org/7-easy-ways-reduce-plastic-waste/

Advancing Sustainable Materials Management: Facts and Figures Report. (2020, April 03). Retrieved from https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/advancing-sustainable-materials-management

Boulissière, S. (2019, March 17). The countries polluting the oceans the most with plastic waste. Retrieved from https://www.plasticethics.com/home/2019/3/17/the-countries-polluting-the-oceans-the-most-with-plastic-waste

Dell, J. (2019, April 30). Six Times More Plastic Waste is Burned in U.S. than is Recycled. Retrieved from https://www.plasticpollutioncoalition.org/blog/2019/4/29/six-times-more-plastic-waste-is-burned-in-us-than-is-recycled

Facts . About Plastic . Help - Plastic Oceans Foundation. (2019, September 28). Retrieved from https://plasticoceans.org/the-facts/

Holden, E. (2019, July 03). US produces far more waste and recycles far less of it than other developed countries. Retrieved from https://www.theguardian.com/us-news/2019/jul/02/us-plastic-waste-recycling

Hundertmark, T. (2019). Accelerating plastic recovery in the United States. Retrieved from https://www.mckinsey.com/~/media/McKinsey/Industries/Chemicals/Our Insights/Accelerating plastic recovery in the United States/Accelerating-plastic-recovery-in-the-United-States-vF.pdf

Improving Waste Analytics: Southern Waste & Recycling. (2016, August 19). Retrieved from https://www.southernwasteandrecycling.com/blog/2016/08/how-waste-analytics-can-improve-your-companys-efficiency/

Parker, L. (2018, December 20). A whopping 91% of plastic isn't recycled. Retrieved from https://www.nationalgeographic.com/news/2017/07/plastic-produced-recycling-waste-ocean-trash-debris-environment/

Research & Data. (n.d.). Retrieved from https://ecology.wa.gov/

Which Data?

The dataset can be found at the link https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/studies-summary-tables-and-data-related. This dataset is historic data regarding sustainable materials and management. It includes data from 1960 to 2017 regarding Municipal Solid Waste (MSW) Landfill, Combustion, Composting, Recycling and Generation.

The solid waste generation dataset is located at https://www.statista.com/statistics/186256/us-municipal-solid-waste-generation-since-1960/ for data from 1960-2017 in millions. Additionally, from the same website, I will be using the dataset regarding the individual materials over the same years. The materials include glass, metals, plastics, rubber, leather, etc.

Research Questions? Benefits? Why analyze these data?

- What years had the most waste generated?
- How much has been polluted over time, total?
- What are the main offenders for products?
- How much has the amount changed over the years?

I am going to review the dataset and see how much of each product is being wasted as well as how it compares. I will clean each dataset as well as combine the data when needed from each. The data will then be combined with additional research regarding recycling and how the landfill is adversely affecting the environment.

The benefit of this research will be for better understanding and education. In the long term, the research will provide the information to others on having a cleaner place to live. I hope to also use this information and research to identify opportunities for recycling/waste management and the importance.

What Method?

- Data Cleaning
- Exploratory Data Analysis
- Visualization

I will explore the datasets and be able to analyze the information to then be displayed for a presentation. The visuals will display how much waste is in the landfills and how this effects the environment overall.

Potential Issues?

- Data availability
- Domain knowledge

I can see a potential issue with opinions. There are a lot of opinions of plastic pollution and how it can be prevented. The project could go off schedule from getting too much information or too little to cause the timeline to go off. In addition, there are always everyday obstacles of illness and time management that could potentially happen.

Concluding Remarks

Waste management has been a big topic for many years throughout different countries. In 2017, 26.8 million tons of plastic were sent to landfills. Plastics can take up to 400 years to break down and a lot can happen within that time. A lot of our daily lives contain elements of plastic and other elements that can also be recycled. Looking into the data, I will determine how much waste has been developed over

the years as well as if there are any trends. Looking at different products such as paper, plastics, and metals, is there one more so than the other that ends up in landfills? The project will focus on how much we are sending each year and what can be done to change it. The information will be shown as visuals and consider any challenges with the data that may arise. Reducing the amount of waste going to landfills can vastly improve how we live today and with the research, I can show how it can make a difference.