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MATH 7360-01

Project Description

For the course project, we will be exploring the Non-Communicable Disease mortality

dataset, aiming to gain valuable insights into the patterns, determinants, and predictive modeling

related to non-communicable diseases and their impact on public health.

This dataset comprises both qualitative and quantitative mortality data attributed to

non-communicable diseases (NCDs) categorized by year, disease type, country, and sex. The

dataset is sourced from the World Health Organization (WHO). It covers a wide range of NCDs,

providing information on mortality rates for different diseases and stratified by gender.

The selection of this dataset is based on public health relevance and data depth. NCDs

have become a significant public health concern globally, causing approximately 74% of global

mortality according to the WHO. Understanding the patterns and trends in NCD-related deaths is

crucial for designing effective healthcare interventions. Also, this dataset offers a detailed,

granular breakdown of NCD-related mortality, containing information on specific diseases and

gender, allowing for in-depth analysis and insights. Meanwhile, WHO is a reputable organization

known for its meticulous, rigorous data collection and quality assurance processes, making this

dataset a reliable source of information.

Some possible questions to explore:

1.   What are the overall trends in NCD-related mortality over time?

2. Are there significant differences in NCD mortality rates between males and females? If so, what diseases contribute most to these disparities?

3. Which non-communicable diseases are the leading causes of mortality in different regions or countries?

4. Have there been significant changes in NCD-related mortality rates in recent years? Are these changes consistent across different diseases?

5. Are there regional variations in NCD mortality rates? How do these variations correlate with factors such as socioeconomic status or healthcare access?

6. Can we develop predictive models to forecast future NCD mortality rates based on historical data and other relevant variables?

Works Cited:

Noncommunicable diseases: Mortality. (n.d.). Retrieved September 7, 2023, from

https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-mortality