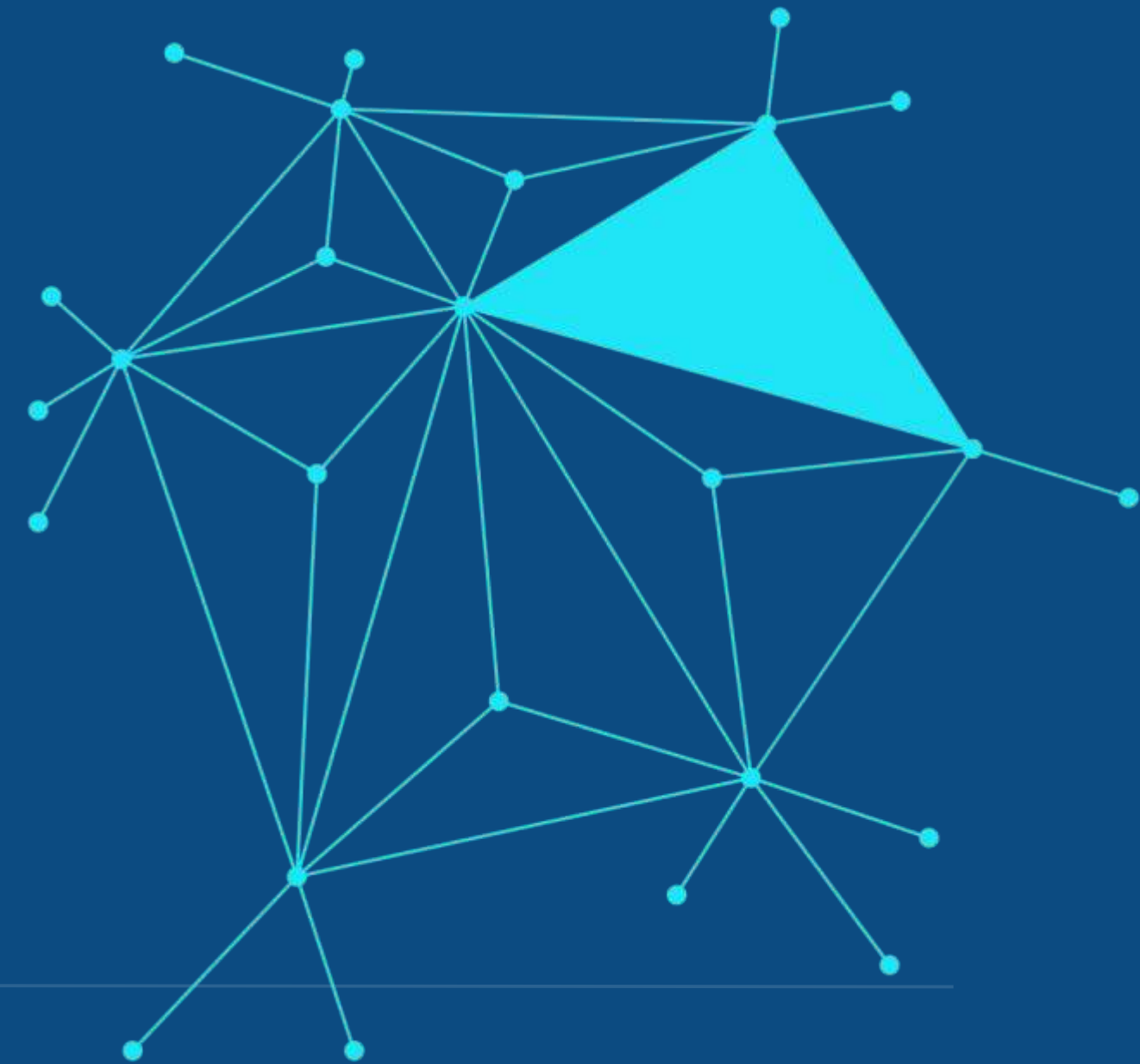# "Analyzing Global Mortality Trends (1970-2010)"

presented by Azadeh Asagri
Mentor: Prof. Aritri Debnath

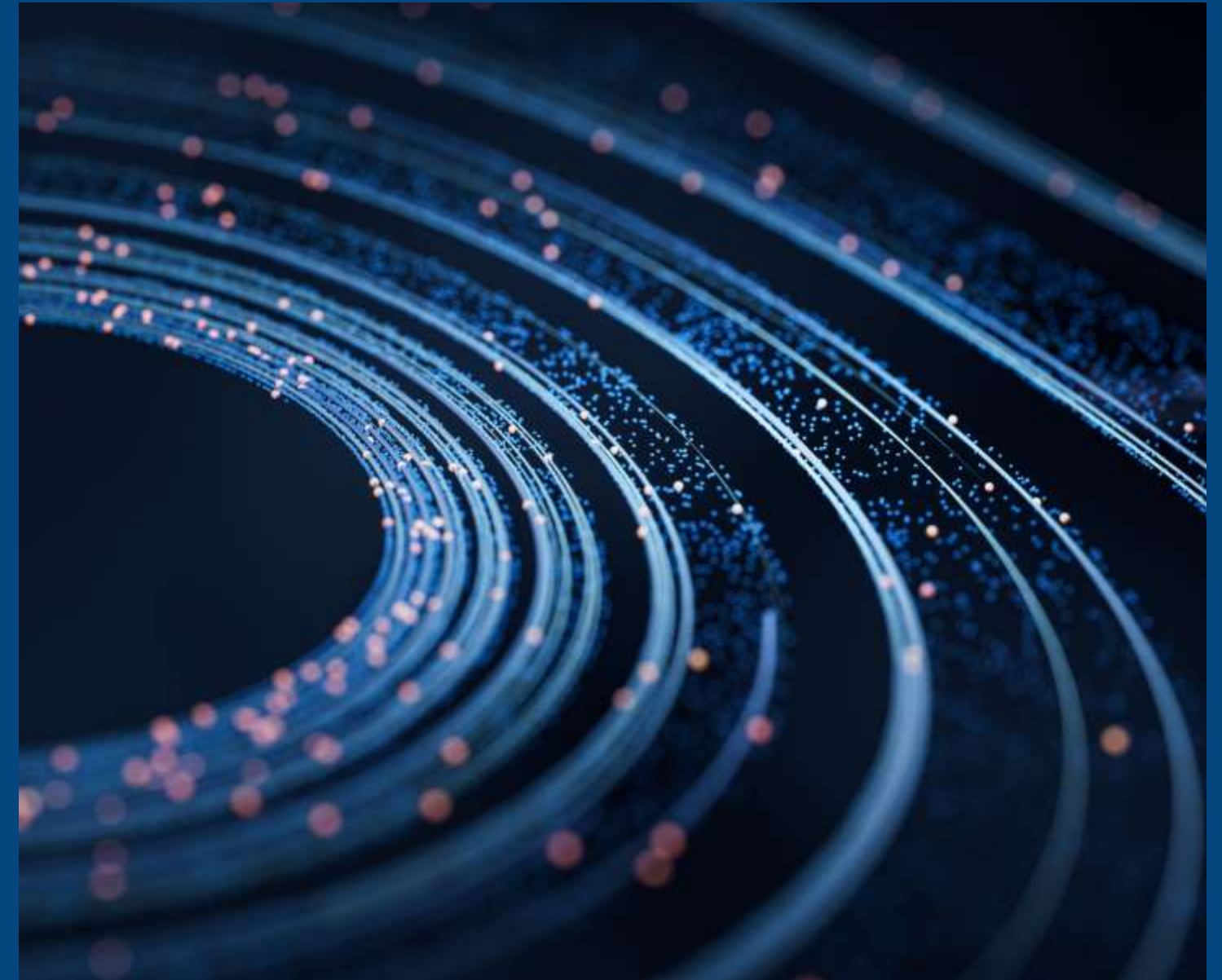# CONTENT

.1 Introduction & Problem Statement

2. Dataset Description

3. Data Preprocessing

4. Exploratory Data Analysis

5. Charts & Findings

6. Conclusion

7. Presenter Profile

INTRODUCTION & PROBLEM STATEMENT

- This project analyzes global mortality data from the GBD 2010 study.

- Objective: Identify trends and patterns in death rates over time by country, age, and sex.

- The objective is to identify trends, demographic patterns, and country-level disparities in death rates.

Data Description

Total Records: 58,905

Countries: 187

Years: 1970–2010

Age Groups: 21

Sex Categories: Male, Female, Both

Average Deaths per Record: ~16,110

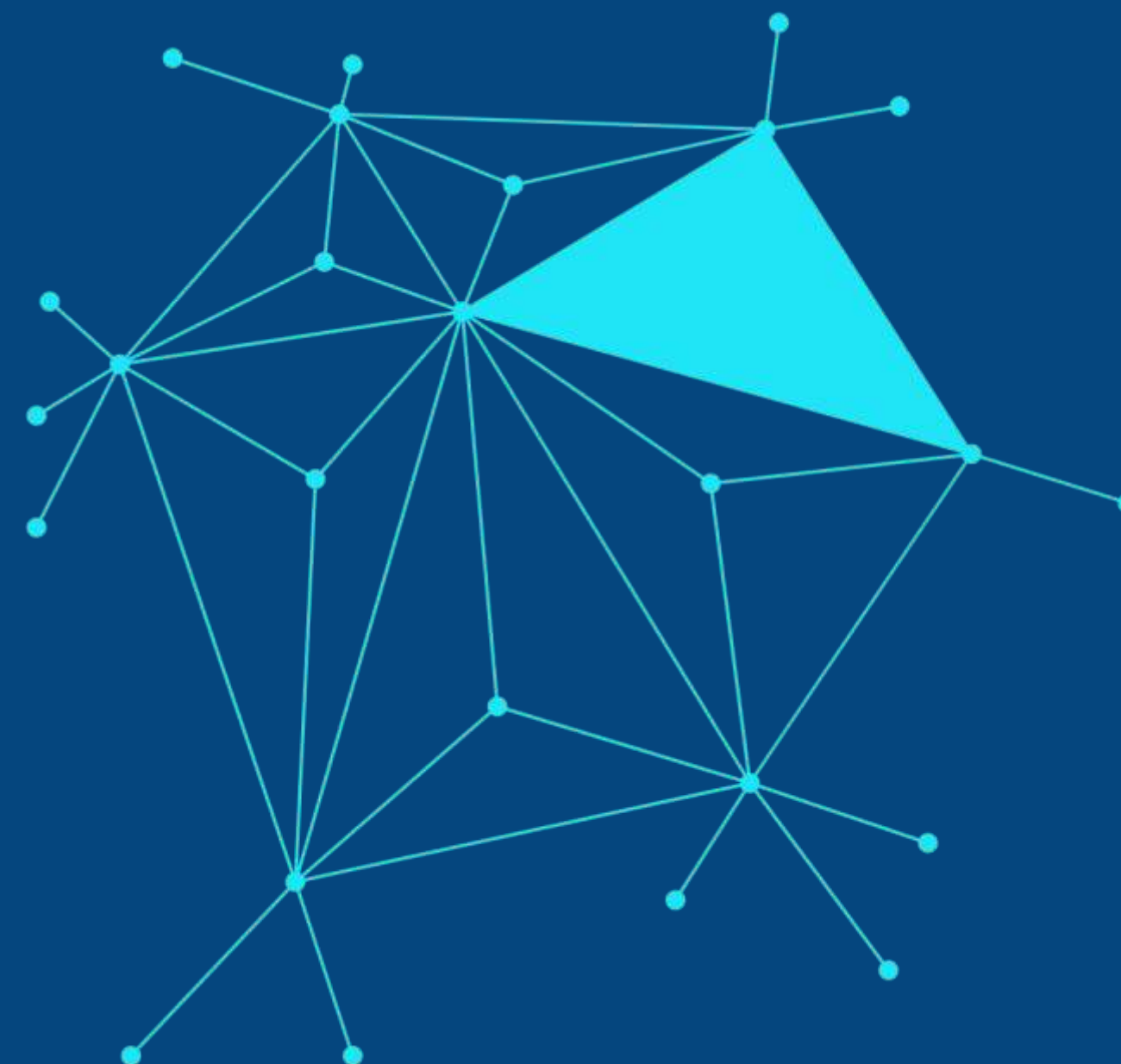Average Death Rate per 100,000: ~7,063

Maximum Recorded Deaths: ~9.9 million

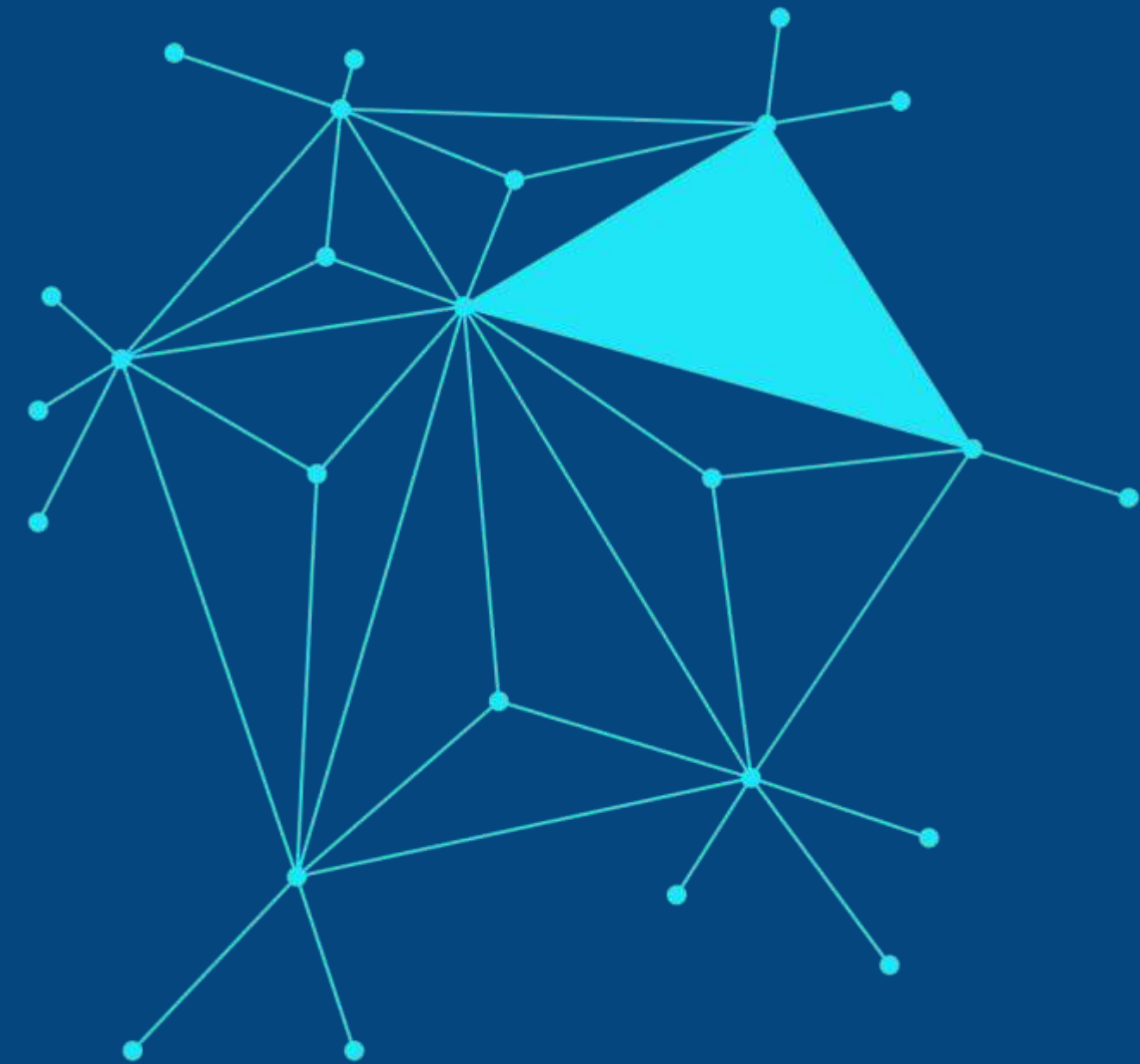Maximum Death Rate: ~423,790 per 100,000

DATA PREPROCESSING

- Source: IHME - GBD 2010 Mortality Results (1970–2010)
- Rows: 58,905 | Columns: 7
- Includes: Country, Year, Age Group, Sex, Number of Deaths, Death Rate per 100,000

EXPLORATORY DATA ANALYSIS

Exploratory analysis shows a consistent increase in total deaths over time, likely due to population growth and improved death reporting mechanisms. This trend prompts further exploration of age, sex, and country-level patterns
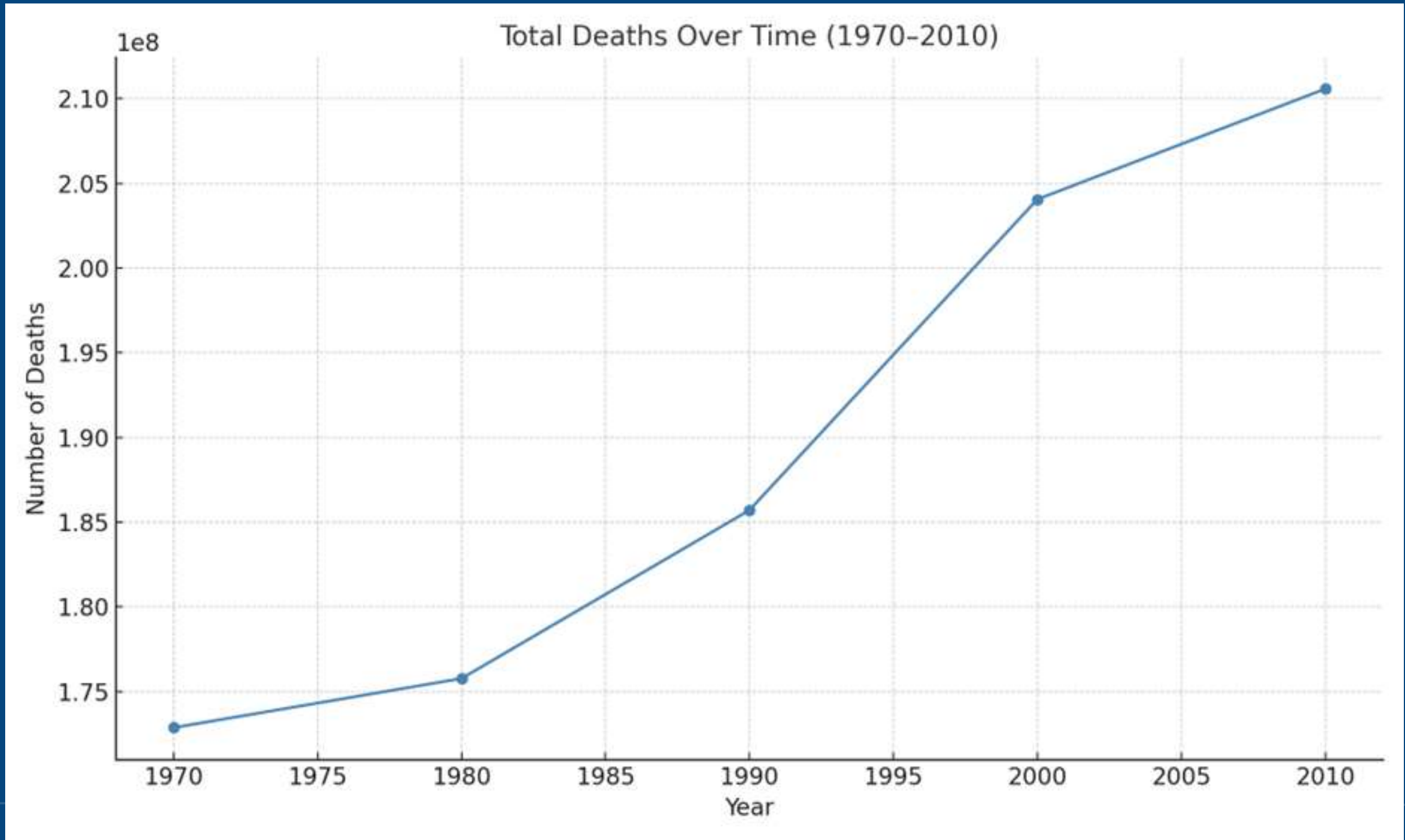
CHARTS & FINDINGS

- Total Deaths Trend: Increasing over decades

- Country-wise Analysis: To be expanded

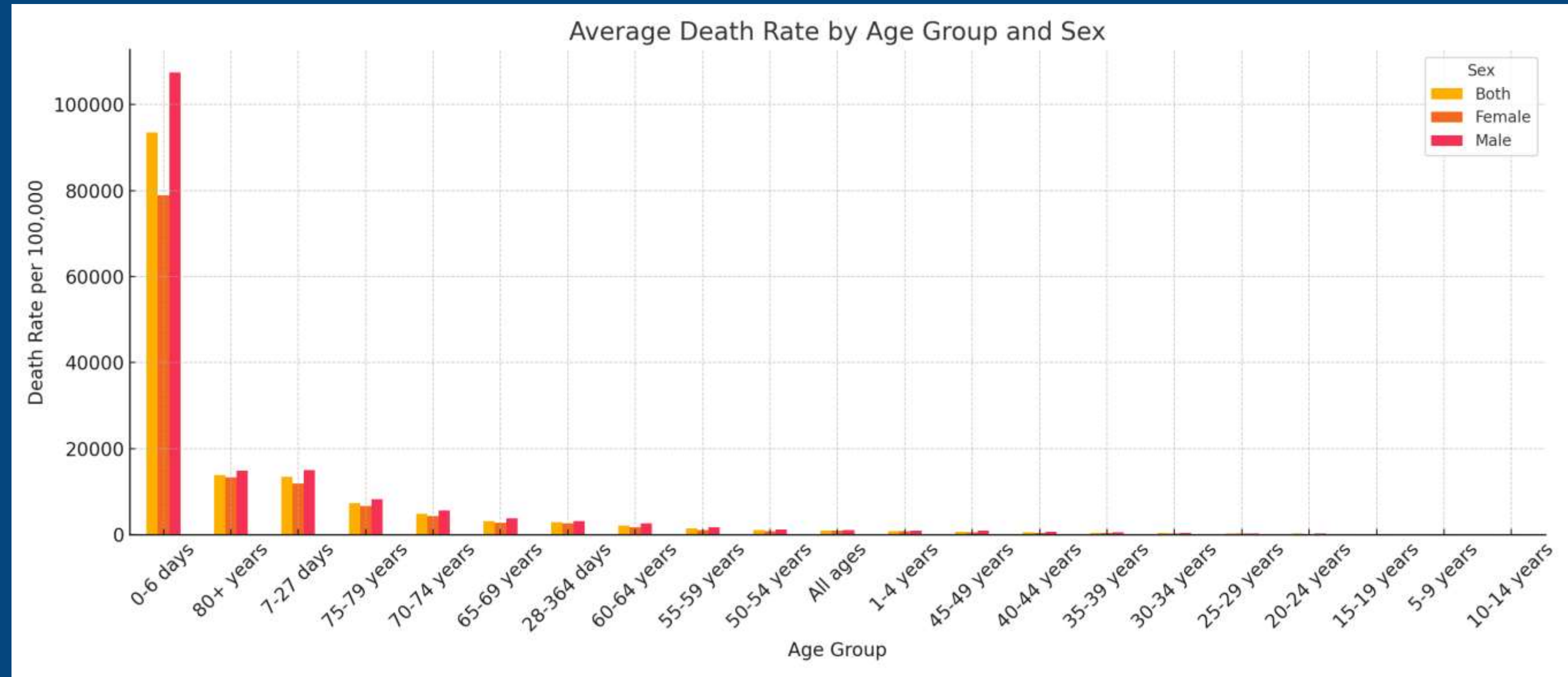- Age & Sex Impact: Analysis planned
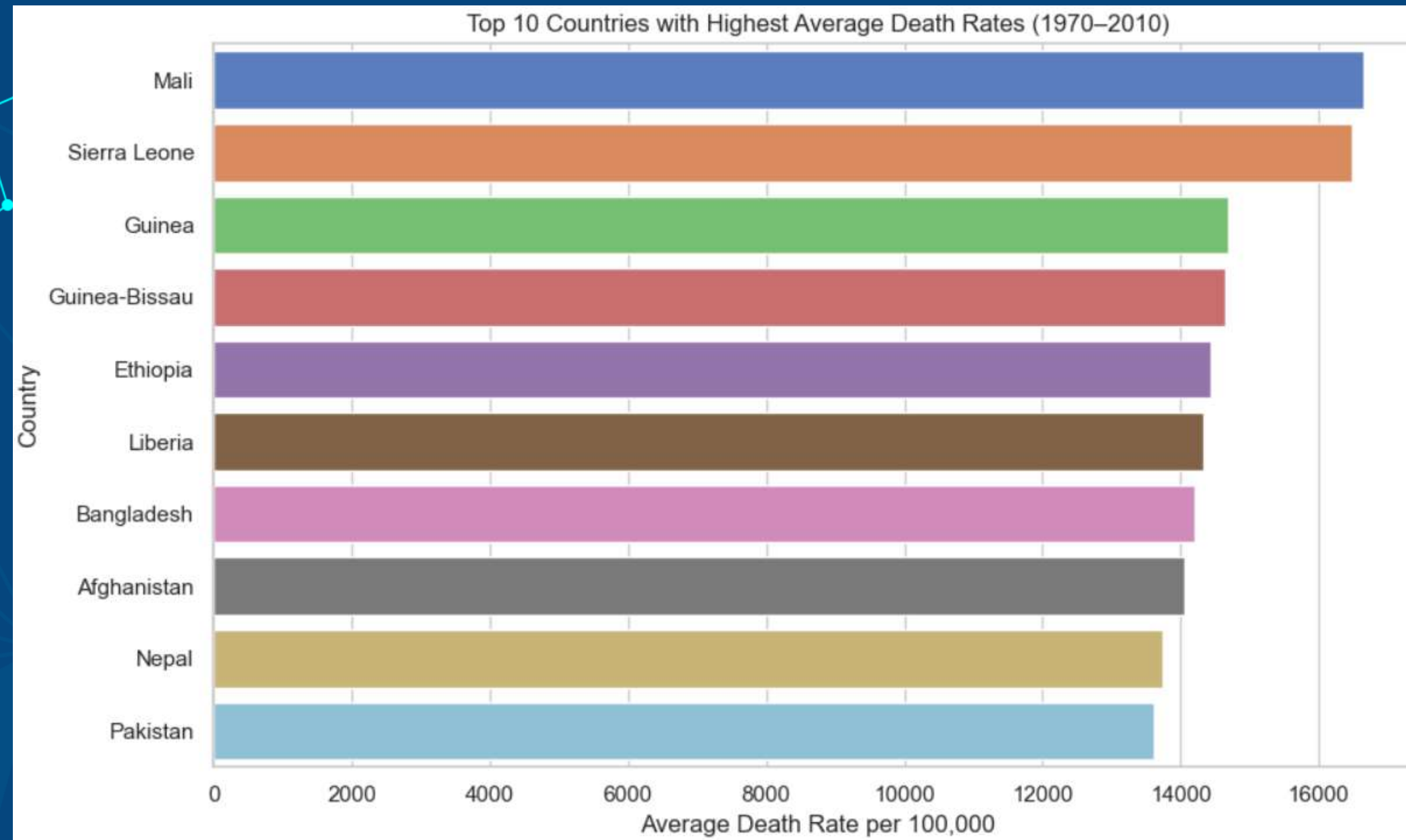
Total Deaths Over Time 1970 To 2010

Average Death Rate by Age Group and Sex

Comparison of average death rates across age groups and sex.

Top 10 Countries with Highest Average Death Rates (1970–2010)

Average death Average death rate per 100,000 gives a fairer comparison across populations. High rates suggest deeper public health issues or demographic effects.

Unlike total deaths, this chart adjusts for population size. These countries have the highest death rates per 100,000, revealing deeper health system issues.

CONCLUSION

- Death Rates Rising Over Time: Global mortality shows a gradual increase from 1970 to 2010, influenced by population
- Sex Differences: In many age groups, males show slightly higher death rates than females.

- Top 10 Countries by Death Rate: Countries with unstable healthcare systems or affected by war/pandemics (e.g., Lesotho, Central African Republic) have the highest death rates.
- Age Group Analysis: Death rates are highest in older age groups (e.g., 80+), as expected.

PRESENTER PROFILE

NAME: AZADEH ASGARI

ROLE: DATA ANALYST / STUDENT

SKILLS: PYTHON, DATA VISUALIZATION, PUBLIC HEALTH ANALYTICS

THANK YOU