1. **Gender Pay Gap Analysis**

**Project Idea**: Investigate the existence and extent of the gender pay gap across different industries, positions, or regions.

**Data Sources**:

• [U.S. Census Bureau Income Data](https://www.census.gov/topics/income-poverty/income.html)

• [Payscale Gender Pay Gap Report](https://www.payscale.com/data/gender-pay-gap)

**Research Questions:**

1. What is the extent of the gender pay gap across different industries and job levels?

2. How has the gender pay gap changed over the past decade in relation to legislative efforts?

1. **Consumer Price Index and Inflation**

**Project Idea**: Study the changes in the Consumer Price Index (CPI) over time and analyze its impact on different sectors or demographic groups.

**Data Sources**:

• [U.S. Bureau of Labor Statistics CPI Data](https://www.bls.gov/cpi/data.htm)

• [OECD Inflation Data](https://data.oecd.org/price/inflation-cpi.htm)

**Research Questions:**

1. How does inflation, as measured by the Consumer Price Index, affect consumer purchasing power over time?

2. What is the relationship between CPI fluctuations and wage growth in different economic sectors?

1. **Analysis of Movie Success Factors**

**Project Idea**: Analyze what factors contribute to a movie’s box office success, such as genre, budget, star power, or release date.

**Data Sources**:

• [IMDb Datasets](https://www.imdb.com/interfaces/)

• [Box Office Mojo](https://www.boxofficemojo.com/)

• [The Movie Database (TMDb) API](https://developers.themoviedb.org/3)

**Research Questions:**

1. Which factors (budget, star power, genre) most significantly predict a movie’s box office success?

2. How does the release timing (seasonality) affect a film’s performance in the domestic market?

1. **Health and Lifestyle Correlations**

**Project Idea**: Examine the relationship between lifestyle choices (diet, exercise, smoking) and health outcomes (heart disease, diabetes).

**Data Sources**:

• [National Health and Nutrition Examination Survey (NHANES)](https://www.cdc.gov/nchs/nhanes/index.htm)

• [World Health Organization (WHO) Global Health Observatory](https://www.who.int/data/gho)

**Research Questions:**

1. What is the relationship between physical activity levels and the prevalence of cardiovascular diseases in adults?

2. How do smoking habits influence the incidence of respiratory illnesses in different age groups?

1. **Educational Outcomes Study**

**Project Idea**: Investigate factors that affect student academic performance, such as socioeconomic status, class size, or access to technology.

**Data Sources**:

• [National Center for Education Statistics (NCES)](https://nces.ed.gov/)

• [Programme for International Student Assessment (PISA) Data](https://www.oecd.org/pisa/data/)

**Research Questions:**

1. How does access to technology at home affect student academic performance in remote learning environments?

2. What is the impact of class size on student achievement in elementary schools?

1. **Climate Change and Temperature Anomalies**

**Project Idea**: Investigate global temperature changes over the past century to identify significant trends and anomalies. Assess the impact of human activities on climate change.

**Data Sources**:

• [NASA’s Goddard Institute for Space Studies (GISS) Surface Temperature Analysis](https://data.giss.nasa.gov/gistemp/)

• [National Oceanic and Atmospheric Administration (NOAA) Climate Data](https://www.ncdc.noaa.gov/)

**Research Questions:**

1. What trends are observable in global temperature anomalies over the past century, and how do they correlate with greenhouse gas emissions?

2. How have temperature changes affected the frequency of extreme weather events in different geographic regions?

1. **Sports Performance Analytics**

**Project Idea**: Analyze player or team performance statistics in a sport of your choice to predict future performance or to identify factors that contribute most to winning games.

**Data Sources**:

• [Basketball Reference](https://www.basketball-reference.com/)

• [Baseball Reference](https://www.baseball-reference.com/)

**Research Questions:**

1. Which individual player statistics are the most significant predictors of a basketball team’s overall season success?

2. How does team payroll correlate with winning percentages in professional sports leagues?