

## Title

# Economic and Social Drivers of Unemployment and Their Impact on Google Search Trends in Austria

## Research Question & Motivation

“How do social and economic factors such as GDP, social spending, and education influence unemployment rates across countries, and to what extent do unemployment rates impact Google search trends and user behavior in Austria?”

- **Economic Insights:**
  - Understand impact of GDP, social spending, education on unemployment rates in Europe
  - Valuable for policymakers and economists
- **Behavioral Patterns:**
  - Analyze influence of unemployment rates on Google search trends in Austria
  - Reveal public sentiment and information-seeking behavior during economic changes

## Data

- **Eurostat:**
  - Provides detailed statistics on unemployment rates, segmented by age, gender, and education levels.
- **OECD:**
  - Offers comprehensive insights into unemployment rates and analyzes government spending on social programs aimed at labor market integration.
- **World Bank:**
  - Supplies historical GDP data for various countries, allowing for an assessment of economic trends and their impact on employment levels.
- **Google Trends Data:**
  - Tracks search interest for the term "Arbeitslosengeld," providing insights into public awareness and concerns about unemployment benefits over time in Austria

## Methods

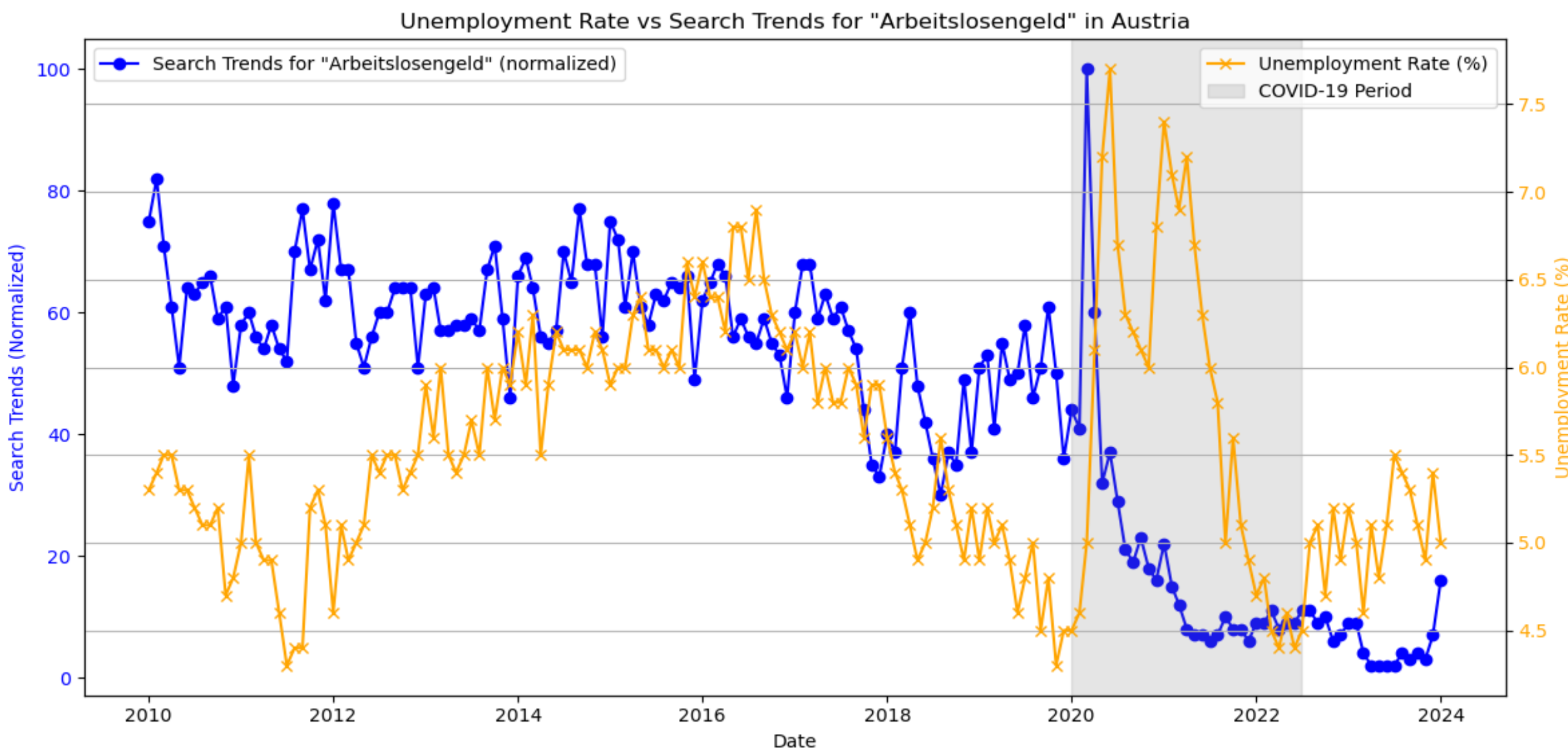
- **Descriptive Statistics**
  - Summarized unemployment rates and related factors across countries and demographics.
- **Correlation Analysis**
  - Examined relationships between key variables such as education levels, GDP, unemployment rates, and search trends.
- **Cross-Correlation Analysis**
  - Identified time-lagged relationships between unemployment rates and search trends (e.g., “Arbeitslosengeld”).
  - Investigated seasonal patterns in unemployment rates and search trends to identify periodic behaviors
- **Comparative Analysis**
  - Regional variations (e.g., Europe vs. other continents) to uncover geographic trends

## Results 1



- Significant gender disparities in countries like Greece and Bosnia and Herzegovina
- Correlation between unemployment rate and education level: **-0.63**

## Results 2



- Cross-correlation starts low but **increases** with time lag
- Indicates a **lagged relationship** between variables
- **Unemployment rate leads** to increased search trends after a delay
- Graph in Repository

## Conclusion

- **Gender disparities** in unemployment rates are evident in **specific** countries
- Unemployment levels and **GDP** show a **correlation** of **0.6**
- **Education levels strongly influence** unemployment, with higher education linked to lower rates
- **Unemployment payments are closely tied** to unemployment levels (also among countries with similar GDP)
- **No clear link** exists between inflation and unemployment **across** countries
- In Austria, **search trends for "Arbeitslosengeld"** somewhat align with unemployment levels
- **Seasonal patterns** detected in search trends related to unemployment

Link to our Github Repository:

