**Datasets Used in the Project**

**Unemployment Dataset (unemployment.csv)**  
**Full Name**: *Unemployment Rate, Participation Rate, and Employment Rate by Educational Attainment, Annual*  
This dataset contains raw data on unemployment rates in Canada between 2018 and 2023. It was sourced from [Statistics Canada](https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410002001). The dataset includes information on unemployment trends categorized by various demographic and economic factors.

**Cleaned Dataset (clean\_unemployment.csv)**  
After performing data cleaning on unemployment.csv, I created the clean\_unemployment.csv dataset. This dataset contains the processed and structured data used for analysis and modeling.

**Population Projections Dataset (projections.csv)**  
**Full Name:** *Population Projections for Canada (2023 to 2073), Provinces and Territories (2023 to 2048): Technical Report on Methodology and Assumptions*  
This dataset was used as a reference for examining population changes across different age groups to support the creation of a realistic synthetic dataset. However, this dataset was not directly included in the analysis or modeling process. It was downloaded from [Statistics Canada](https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710005701&pickMembers%5B0%5D=1.1&pickMembers%5B1%5D=3.1&pickMembers%5B2%5D=4.1&cubeTimeFrame.startYear=2023&cubeTimeFrame.endYear=2073&referencePeriods=20230101%2C20730101).

**Synthetic Dataset (predicted\_unemployment\_dataset.csv)**  
Based on the cleaned unemployment data and insights derived from the projection dataset, I generated a synthetic dataset to simulate potential unemployment trends. This file represents the final predictions and scenarios for unemployment rates.

**Sources:**

Raw unemployment data: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410002001>

Population projections data: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710005701&pickMembers%5B0%5D=1.1&pickMembers%5B1%5D=3.1&pickMembers%5B2%5D=4.1&cubeTimeFrame.startYear=2023&cubeTimeFrame.endYear=2073&referencePeriods=20230101%2C20730101>

Detailed information is included in the project report.