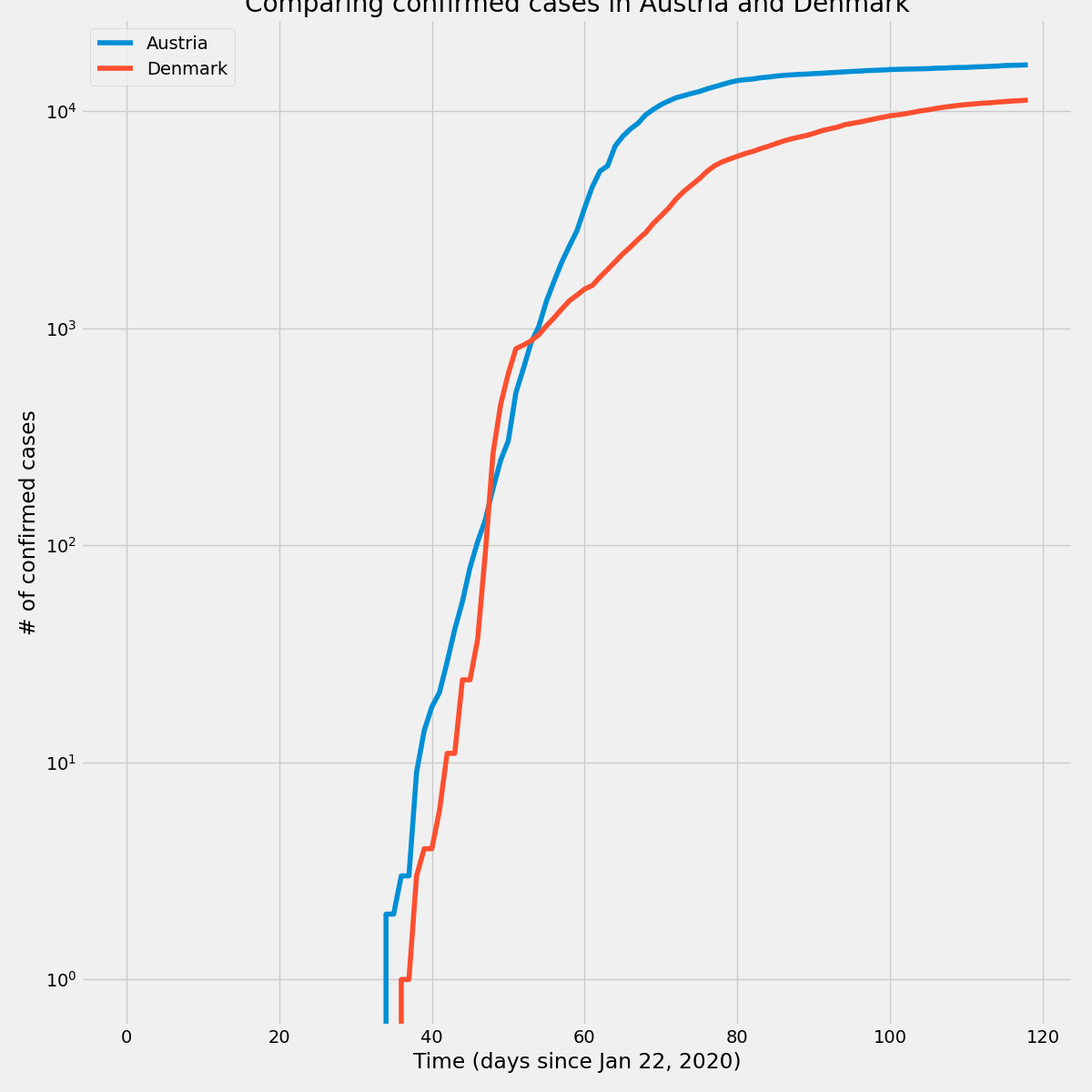
CS 349: Final

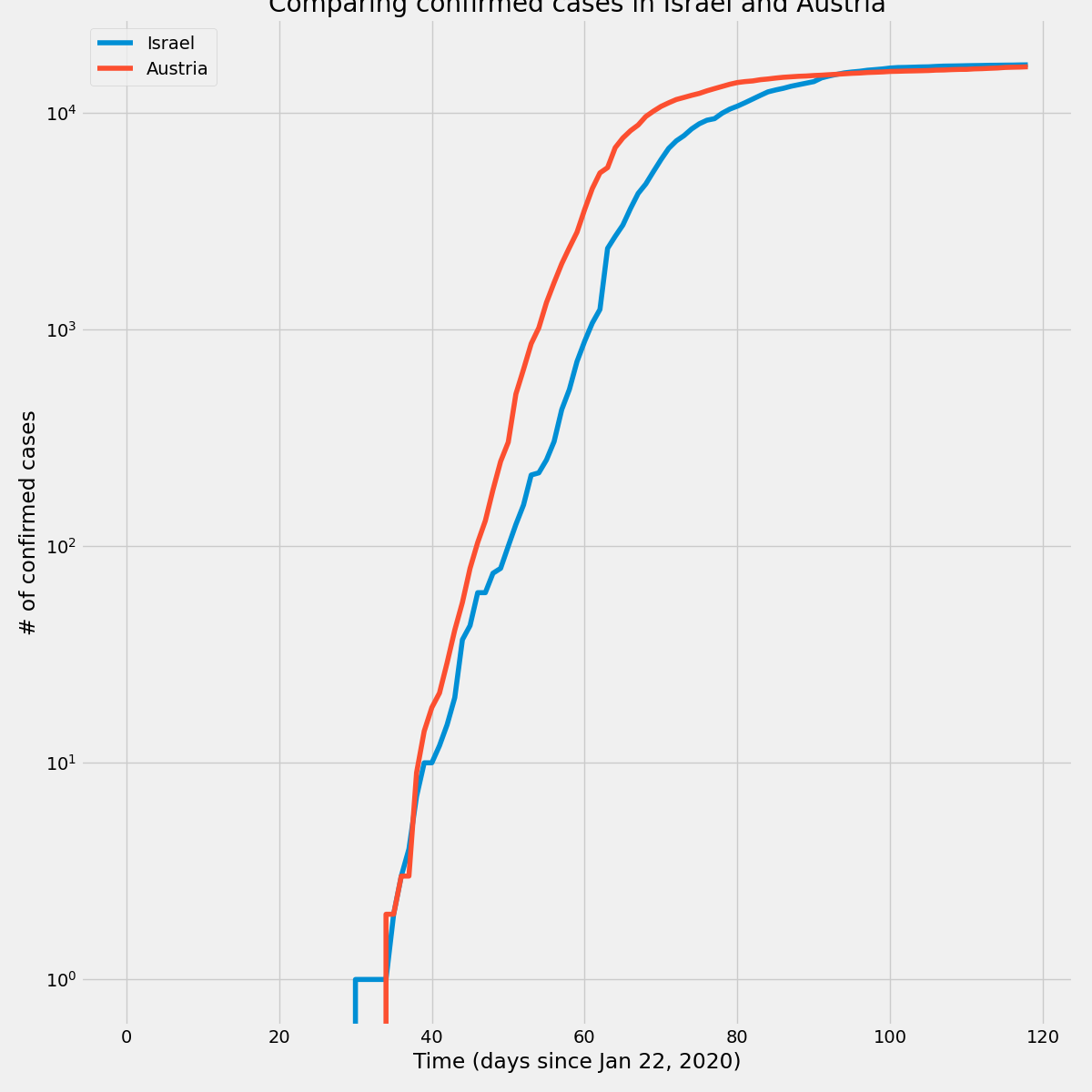
I chose Option 1, with the Coronavirus dataset from Johns Hopkins University. I visualized all three experiments which were provided with the dataset. Here is a link to the code and images: <https://github.com/ellencwade/coronavirus-2020>

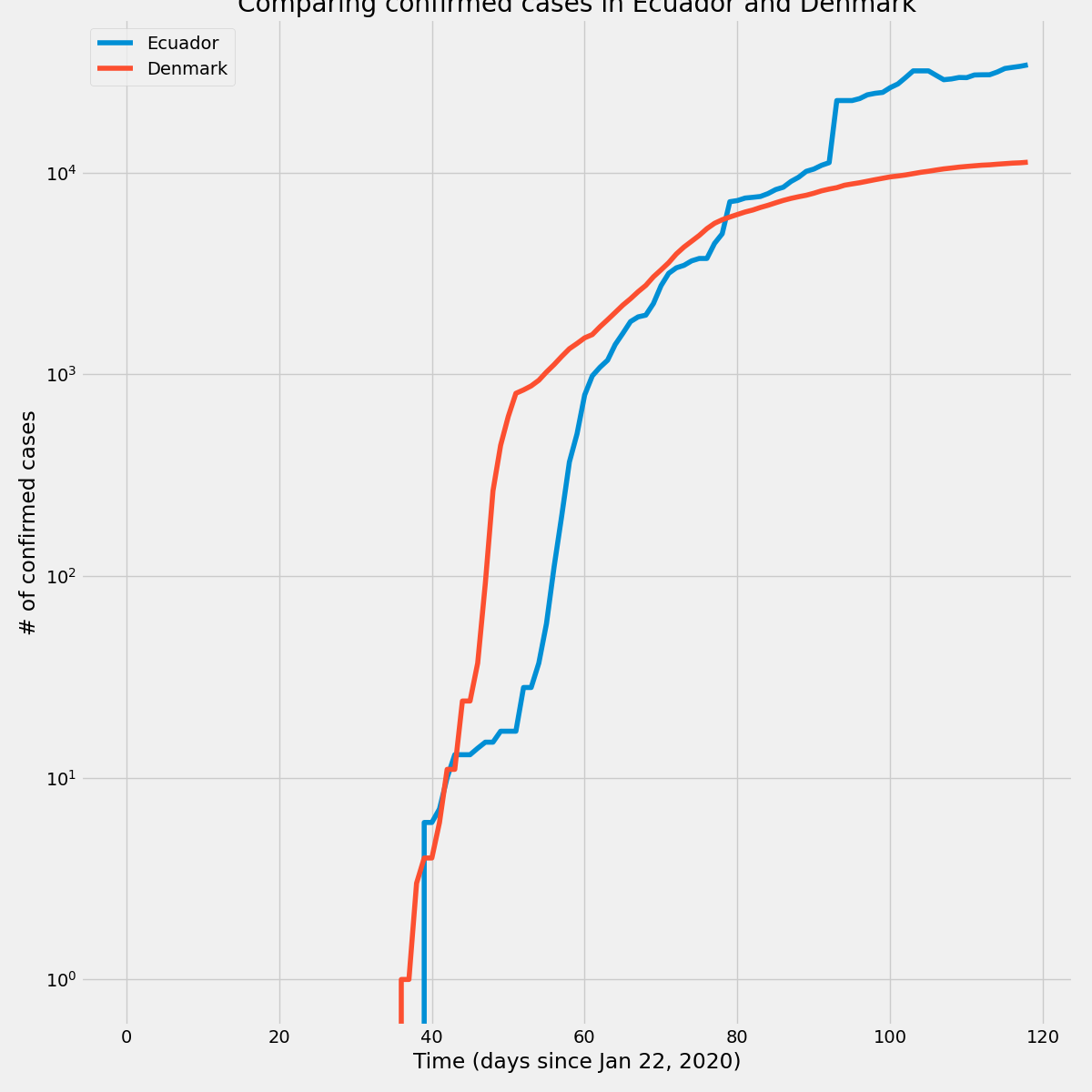
Visualization 1: KNN\_Raw

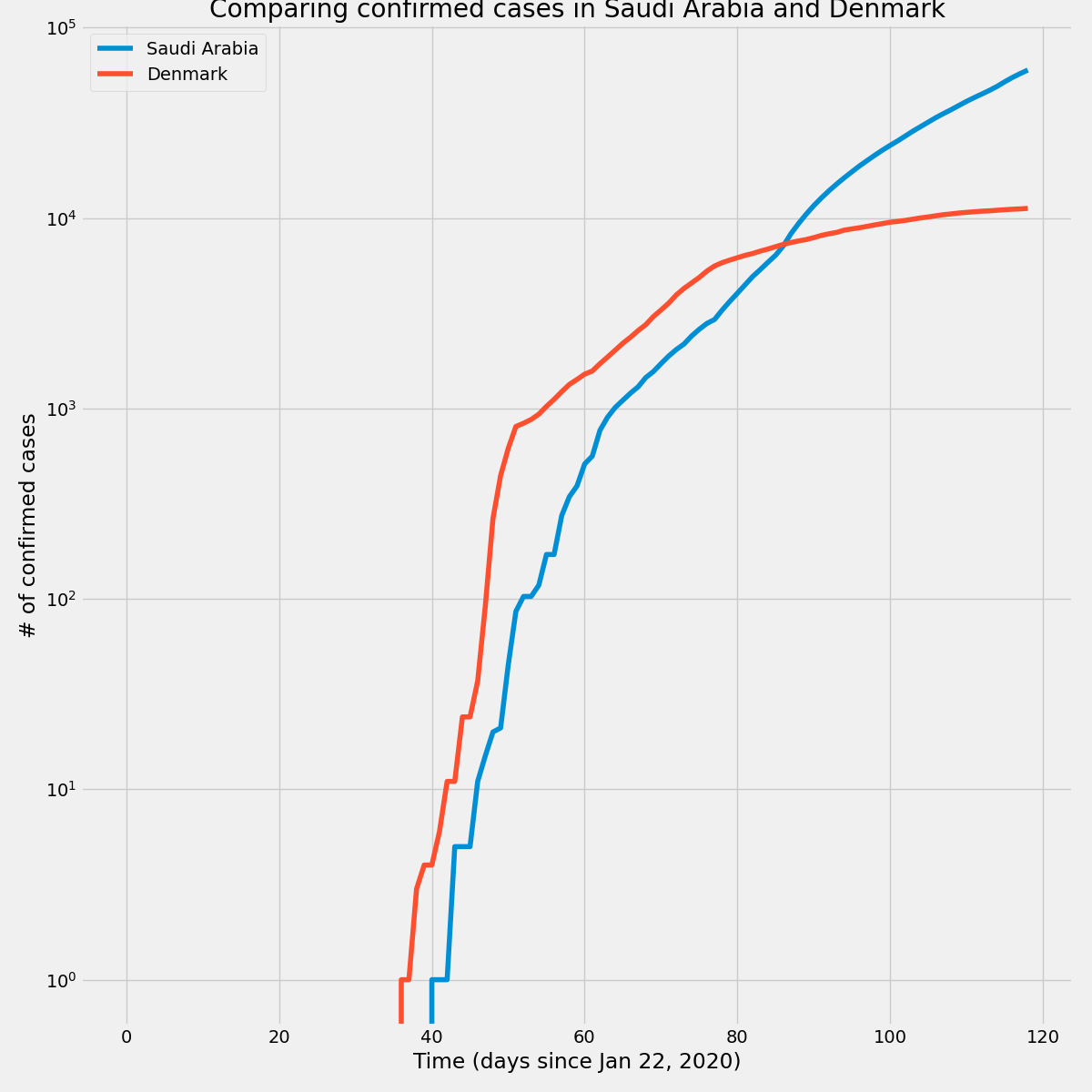
My code (viz\_raw\_manhattan.py and viz\_raw\_minkowski.py) visualized the results of knn\_raw.py on the time\_series\_covid19\_confirmed\_global data to show similar countries’ data on one plot. Plots for all countries are in the exp/results folder. Below are some examples.

1a: Using Manhattan distance (in raw\_manhattan folder)

  
Figure 1: Confirmed Cases in Austria vs Denmark

  
Figure 2: Confirmed Cases in Israel vs Austria

1b: Using Minkowski distance (in raw\_minkowski folder)  
Figure 3: Confirmed Cases in Ecuador vs Denmark

  
Figure 4: Confirmed Cases in Saudi Arabia vs Denmark  
  
Visualization 2: KNN\_Diff

My code (viz\_diff\_manhattan.py and viz\_diff\_minkowski.py) visualized the results of knn\_diff.py on the time\_series\_covid19\_confirmed\_global data to show similar countries’ data on one plot. Plots for all countries are in the exp/results folder. Below are some examples.

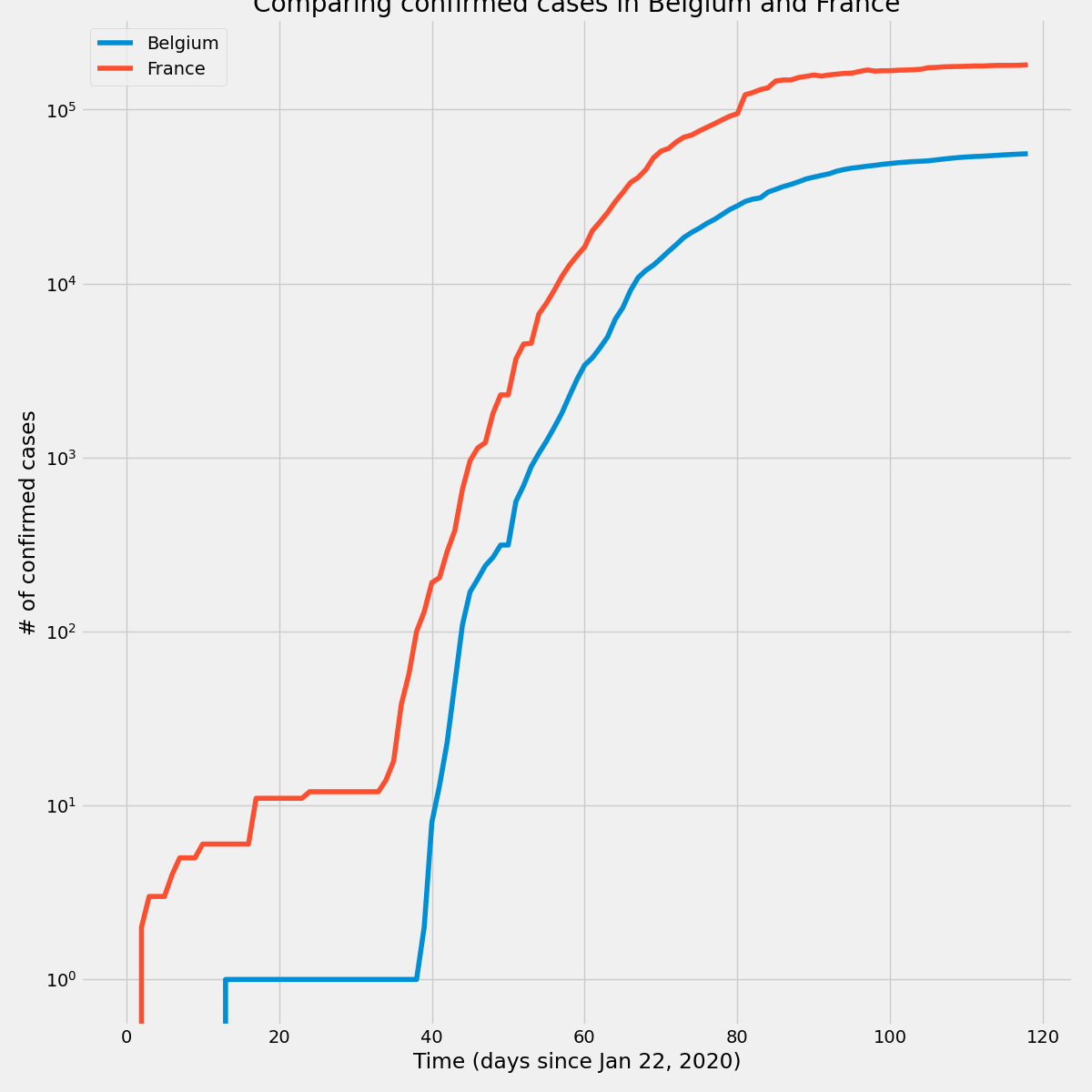
2a: Using Manhattan distance (in diff\_manhattan folder)

Figure 5: Confirmed Cases in Belgium vs France

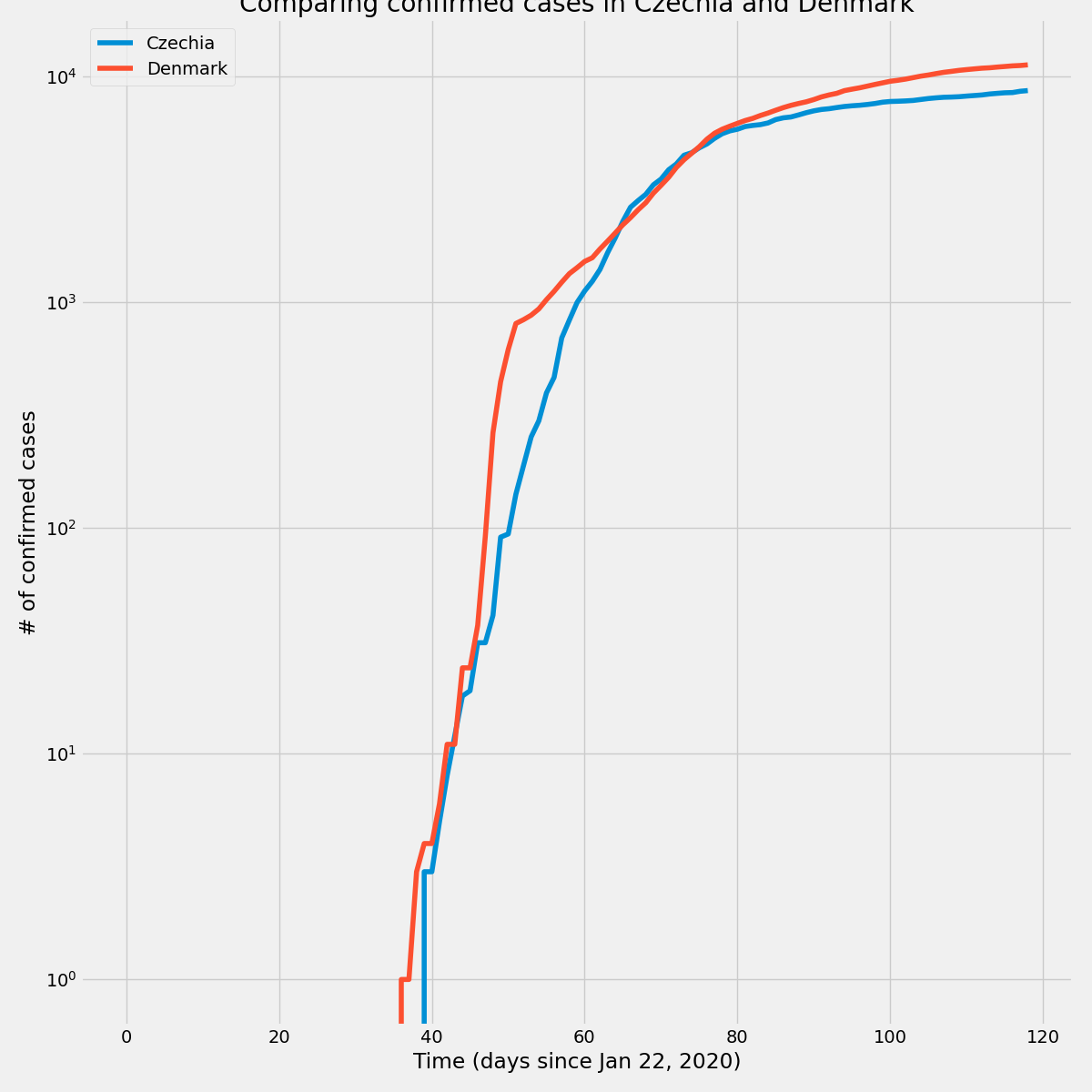


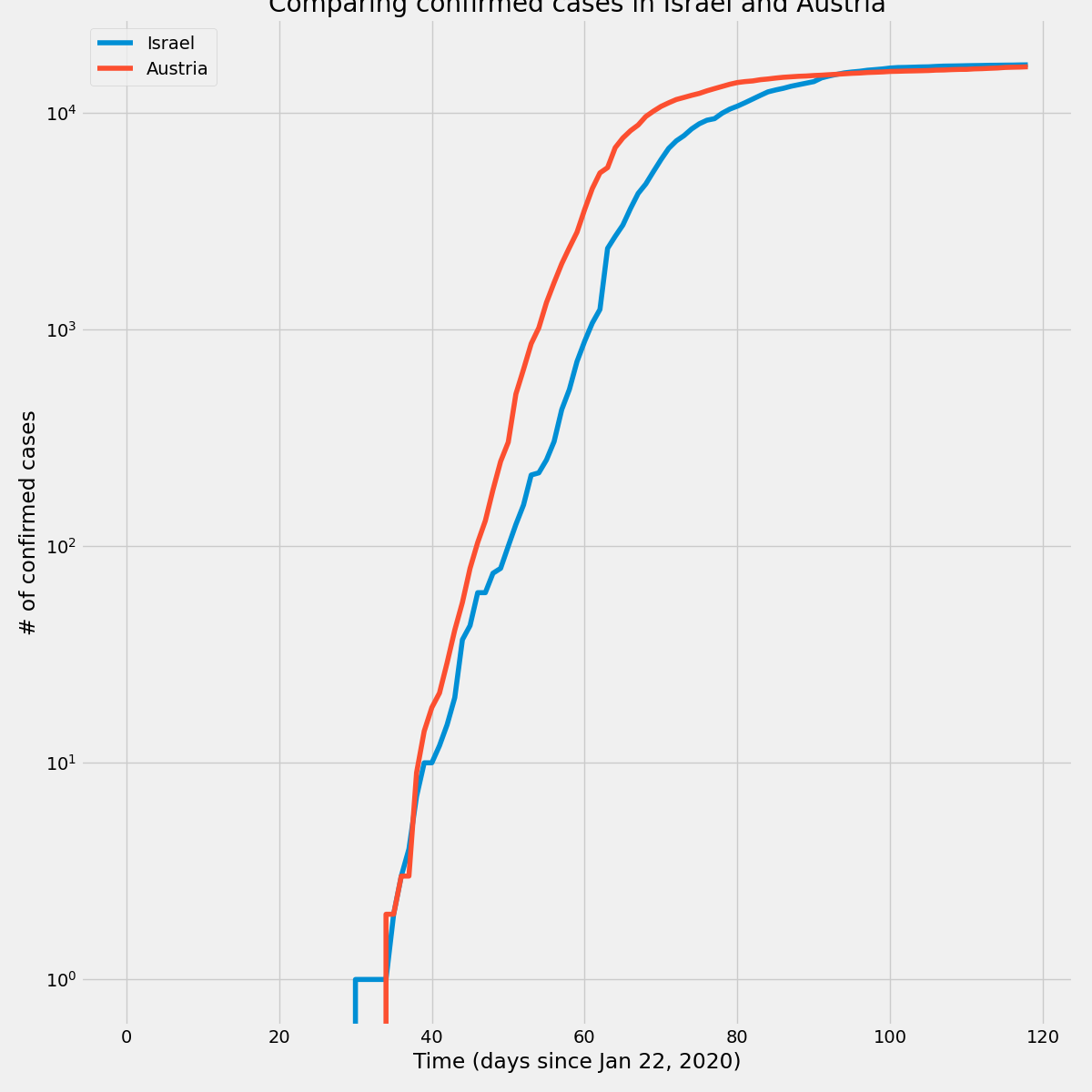
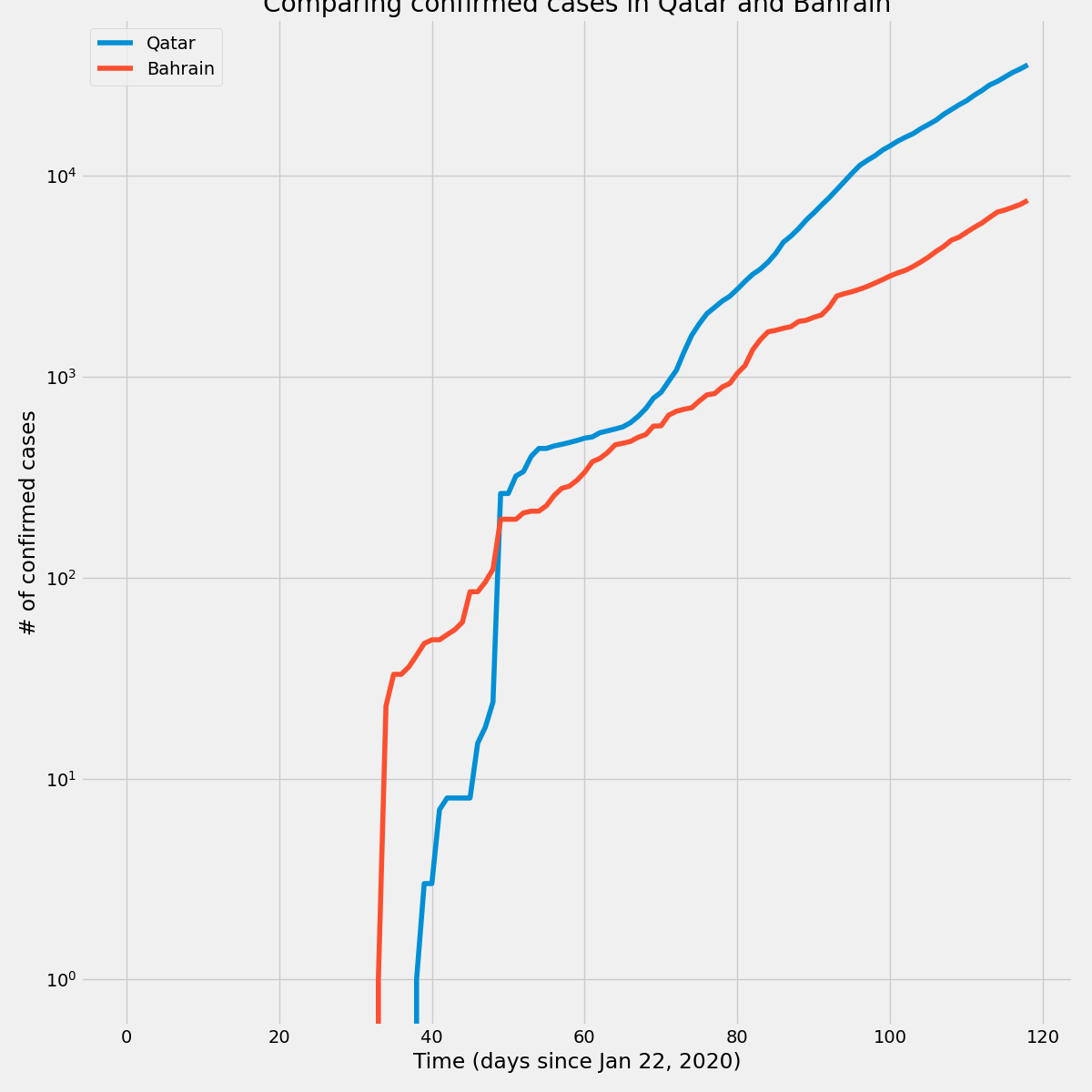
Figure 6: Confirmed Cases in Czechia vs Denmark  
  
2b: Using Minkowski distance (in diff\_minkowski folder)  
Figure 7: Confirmed Cases in Israel vs Austria

Figure 8: Confirmed Cases in Qatar vs Bahrain  
  
Visualization 3: KNN\_Dist\_Diff

My code (viz\_dist\_diff\_manhattan.py and viz\_dist\_diff\_minkowski.py) visualized the results of knn\_dist\_diff.py on the time\_series\_covid19\_confirmed\_global data to show similar countries’ data on one plot. Plots for all countries are in the exp/results folder. Below are some examples.

3a: Using Manhattan distance (in dist\_diff\_manhattan folder)

A close up of a map

Description automatically generated  
Figure 9: Confirmed Cases in Norway vs Austria

A close up of a map

Description automatically generated  
Figure 10: Confirmed Cases in Qatar vs Bahrain

1a: Using Minkowski distance (in dist\_diff\_minkowski folder)

A close up of a map

Description automatically generated  
Figure 11: Confirmed Cases in Iceland vs Bahrain

A close up of a map

Description automatically generated  
Figure 12: Confirmed Cases in South Africa vs Bahrain