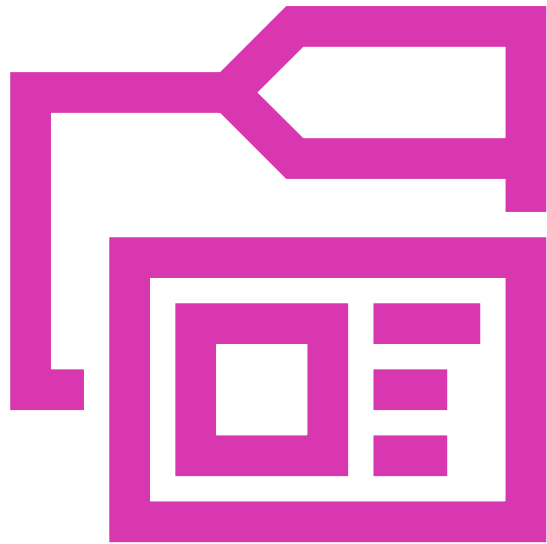


ANALYSIS OF COVID-19 INFECTION TRENDS

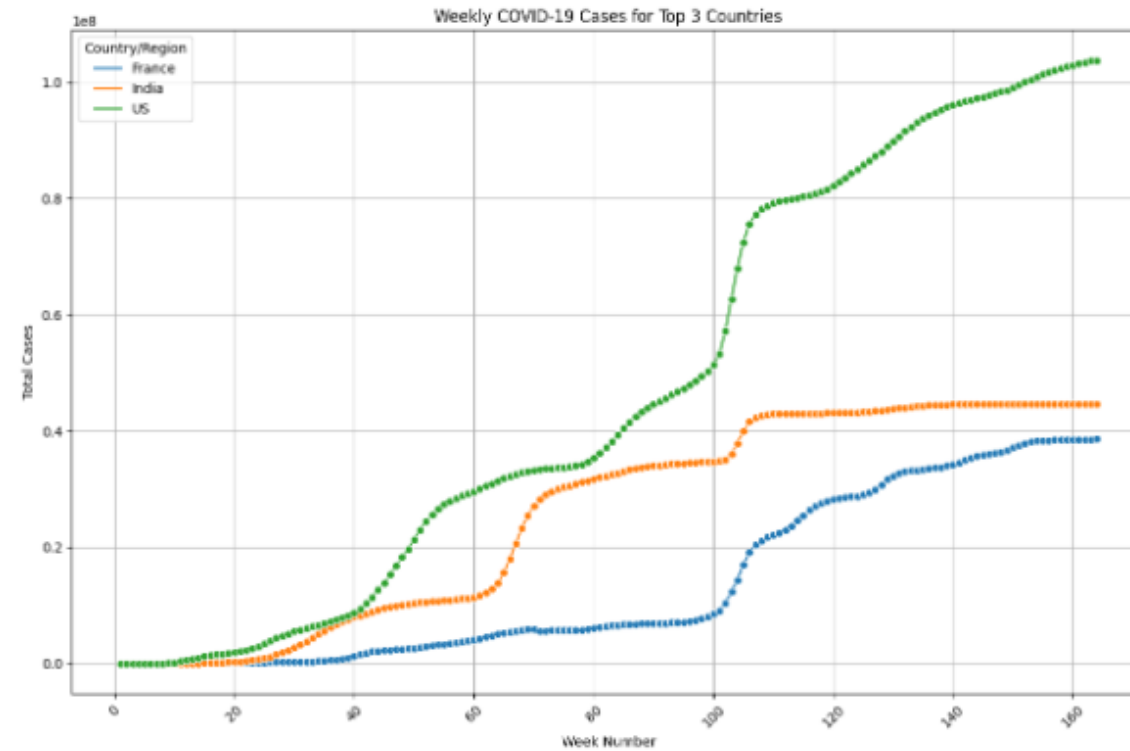
N M FAZLEY RABBY
STUDENT ID: A00090975
DATE: 11/05/2024



OVERVIEW OF PRESENTATION

TO PROVIDE INSIGHTS FROM THE JOHNS HOPKINS
UNIVERSITY COVID-19 DATASET FOR INFORMED DECISION-
MAKING

THE TOP THREE COUNTRIES' WEEKLY INFECTIONS WERE DISTRIBUTED IN A LINE GRAPH



PREDICTING THE FUTURE INFECTIONS OF TOP 3 COUNTRIES ON WEEKLY BASIS

- Variables:
- Independent: Week Number.
- Dependent: Confirmed Cases.
- Key Findings:
- Trend Insights: Positive trends indicate increasing infections over time.
- Predictions: Showcased next 2 weeks, highlighting significant expected increases.

Predictions for US for the next 2 weeks:

Week 165.0: 2068.93 new cases

Week 166.0: 2068.93 new cases

Predictions for India for the next 2 weeks:

Week 165.0: -1428.44 new cases

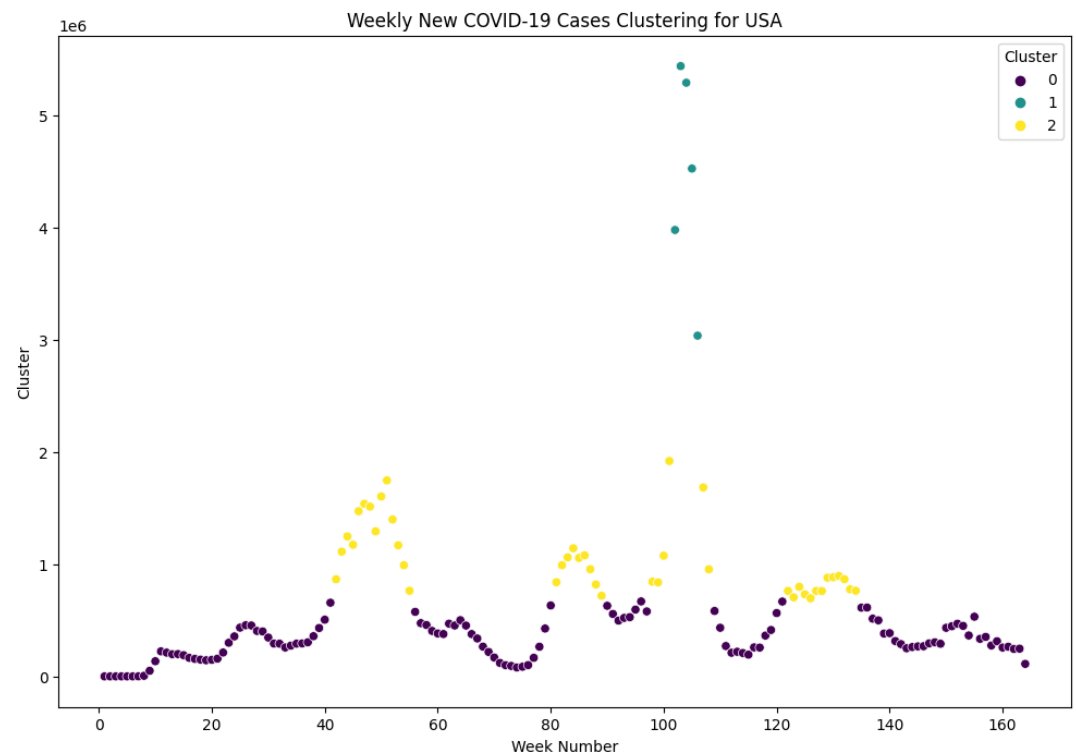
Week 166.0: -1428.44 new cases

Predictions for France for the next 2 weeks:

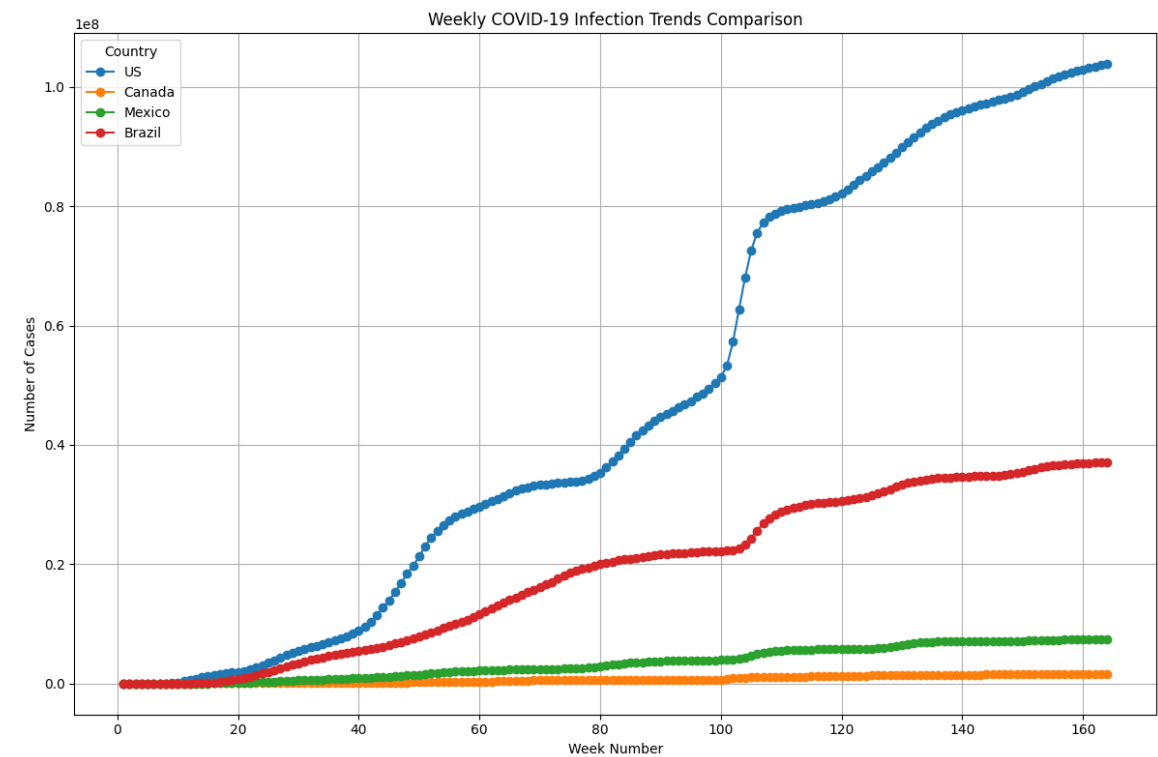
Week 165.0: 2489.66 new cases

Week 166.0: 2489.66 new cases

WEEKLY NEW COVID-19 CASES FOR CLUSTERING

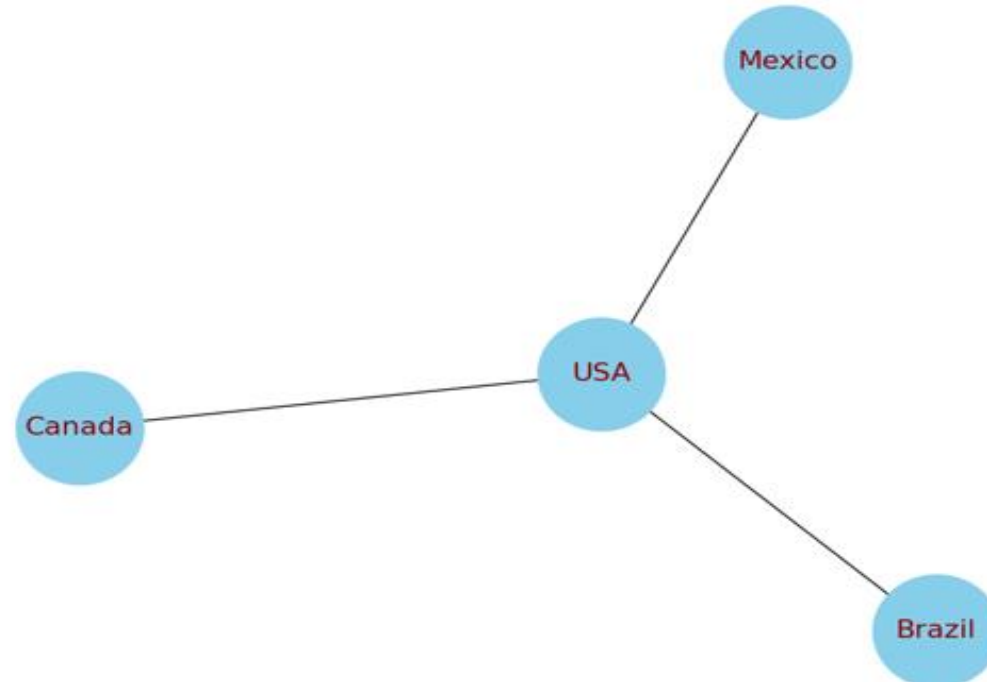


WEEKLY COVID-19 INFECTION TRENDS COMPARISON BETWEEN NEIGHBOURING COUNTRIES



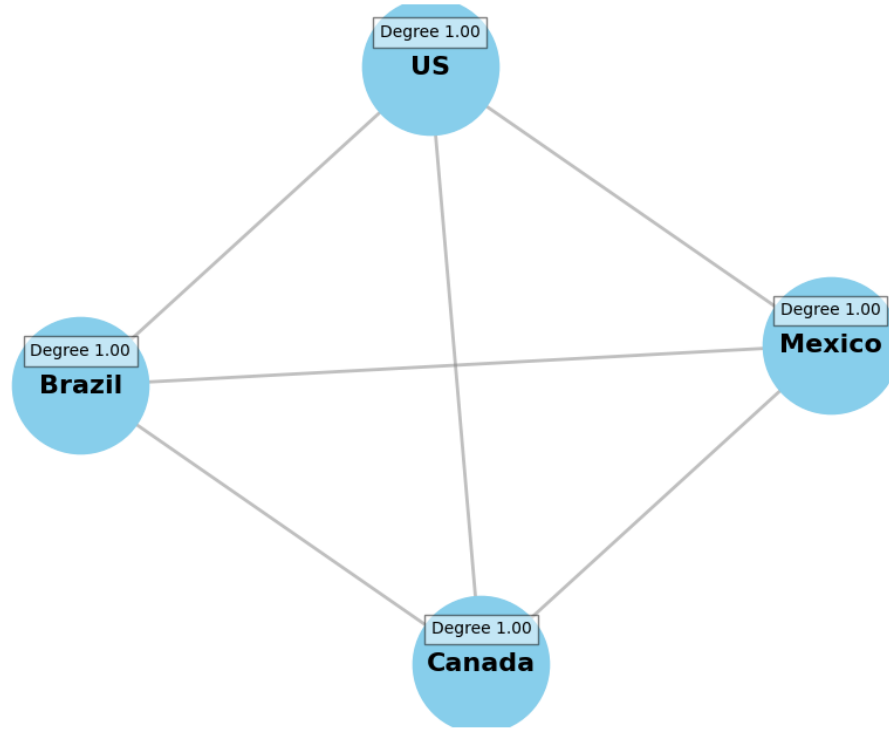
GRAPH SHOWING WEEKLY NEW CASES RELATIONSHIP AMONG USA AND NEIGHBOURING COUNTRIES

Graph Showing Weekly New Cases Relationship Among USA and Neighboring Countries

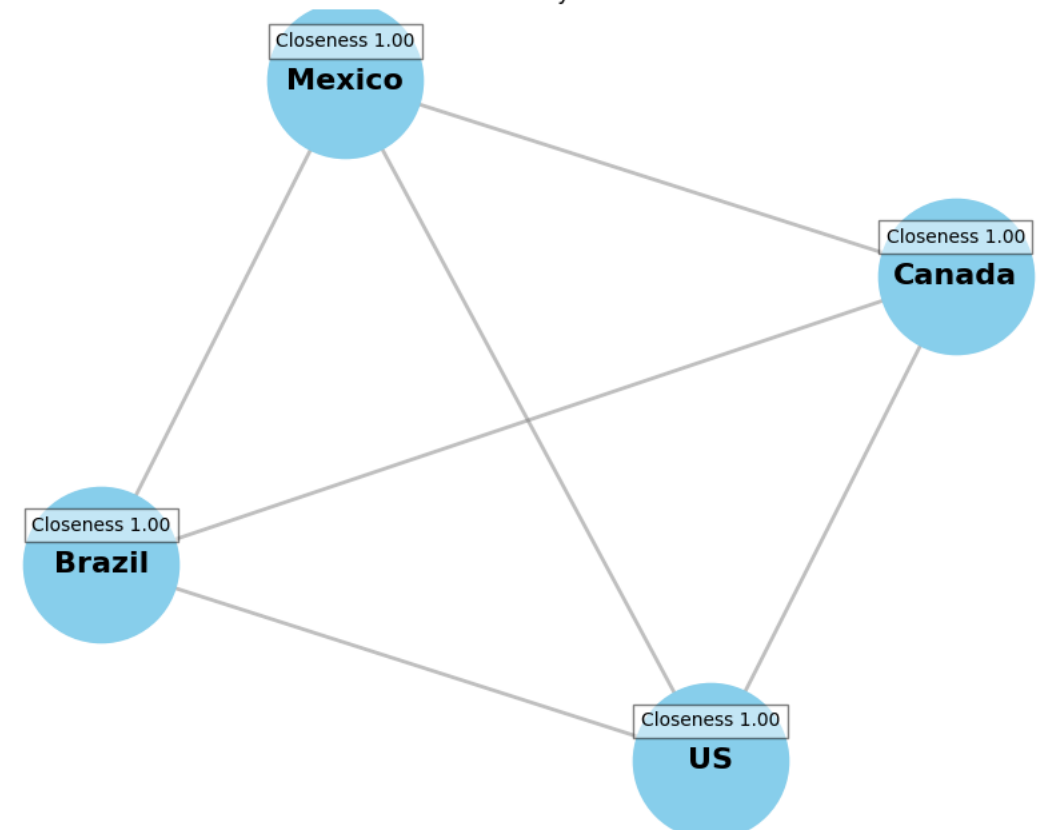


CENTRALITY MEASURES

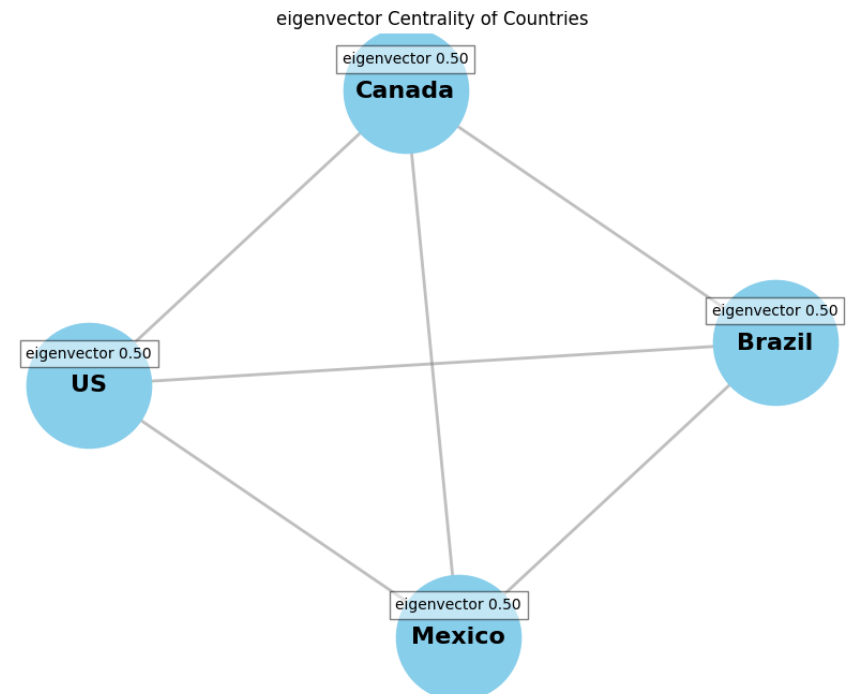
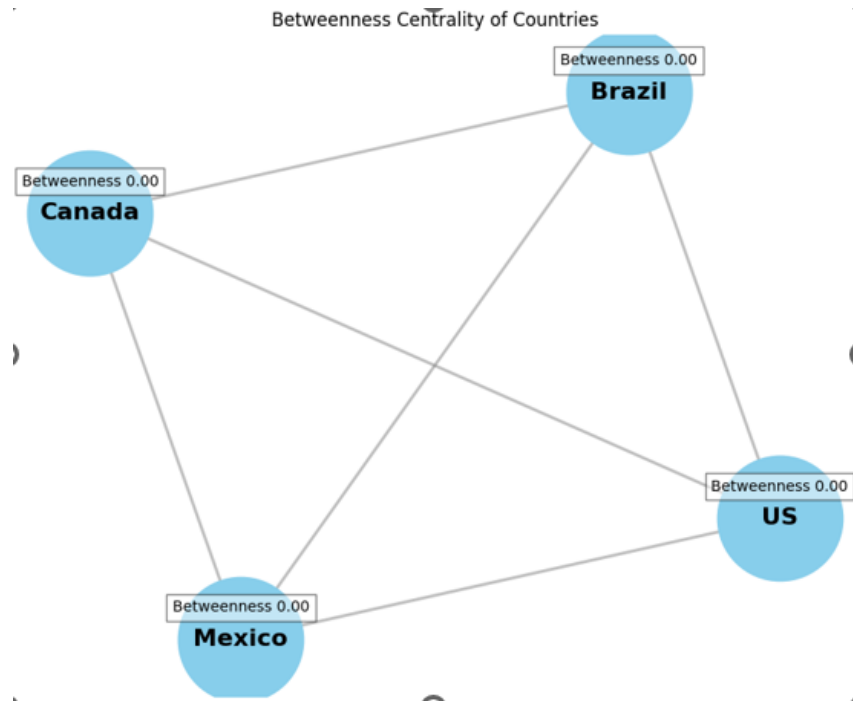
Degree Centrality of Countries



Closeness Centrality of Countries



BETWEENNESS AND AGENTCENTRALITY





DECISION SUPPORT AND RECOMMENDATIONS:

Summary of Key Insights:

- The thorough research shows that the neighbouring countries of USA impacted countries have persistent increases in COVID-19 infections, underscoring the urgent need for continued attention and flexible response tactics.
- Certain times and patterns have been found by clustering and graph analytics, which are essential for understanding the mechanics of transmission and forecasting future outbreaks.

Recommendations for Neighbouring Countries:

- Improving testing, contact tracking, and localised lockdowns as public health actions during peak infection periods found in our analysis. Consistent surveillance is strongly advised for surrounding countries, as are uniform safety regulations for international travel and trade.
- Boosting healthcare capacity and guaranteeing the availability of essential supplies in order to be ready for any spikes.



Thank you