Summary of Our Project

International trade networks are complex systems where countries are connected by trade relationships. Understanding these networks can help us understand global trade flows and how efficiently goods are moving worldwide. By studying the structure of the international wheat trade network, we can identify essential players and regional trading patterns.

The primary objective of our project is to identify key players in the international wheat trade network, find trading patterns to enhance our understanding of global food distribution dynamics, find dominating pairs in terms of volume and detect communities.

By analysing the International Wheat Trade Network of 2022, we show that we successfully found the country which was the foremost importer and the country which was the foremost exporter. Also, we were able to show the communities forming in the network, and there were five major communities, two of which were very small. Finally, we were able to show the top five highest trade flows of networks.

First, we thought our network would follow the power law, but based on the results, we learned that it doesn't follow the power law as the gamma value was 1.39.

The main results for our network were that China was the foremost importer while Australia was the foremost exporter. There were five communities, of which three were main, and some of the countries were not part of the five communities. The highest trade flow was between the Russian Federation and Turkey. These were the main results of the network.