Team Contribution Report

This document summarizes the individual contributions of each team member to the project .

Important Links:

Website: https://suprithakulkarni31.wixsite.com/my-site-4
GitHub: https://github.com/Nikitha2002/Pandemic-TradeLens
Google Collab:
https://colab.research.google.com/drive/1uqGQGk0nea3QlASaFbAvVSU8Nh8PAToA?usp=sharing#scrollTo=3J6gn6si1Amk
Google Drive (contains Report and PPT):
https://drive.google.com/drive/folders/1zfxILtbzibycEiwrtlfb3JNWIwrURZ9o

Team Members and Contributions

Nikitha Lalam

Milestone 1:

- I discussed project ideas with the team and proposed potential research questions.
- I created the GitHub repository and uploaded the initial requirements.

Milestone 2:

- I performed data cleaning to prepare the dataset for analysis and ensured data consistency and accuracy.
- I created exploratory visualizations to identify trends, patterns, and outliers within the dataset.
- I organized the project structure and updated the GitHub repository with the dataset, Python code, and a requirements.txt file to support reproducibility.
- I collaborated with team members to review the cleaned data and visual insights before proceeding to modeling.

Milestone 3:

- I implemented regression models and evaluated their performance using appropriate metrics.
- I updated the GitHub repository with model scripts and datasets.
- I prepared the first version of the poster presentation slides.

Milestone 4:

- I finalized the poster for the presentation.
- I updated the GitHub repository with the completed reports and final project files.
  I conducted further model evaluation to validate and compare regression model performance.

Sreya Reddy Narayana Reddy

Milestone1:

- Defining Problem Statement
- Contributed in defining Research questions
- Hunt for Potential datasets and its sources

- Contributed in designing Blueprint for Your Project

Milestone 2:

- Dataset acquisition from multiple reliable sources (World Bank API + IMF-like + COVID impact dataset)
- Data integration and restructuring (long format transformation)

Milestone 3:

- Classification model implementation (Decision Tree and k-Nearest Neighbors) and performance evaluation using Accuracy, Precision, Recall, F1-score, and ROC-AUC.
- Clustering model implementation (K-Means) and evaluation using Silhouette Score and Davies–Bouldin Index.
- Drafting, organizing, and finalizing the project report in ACM-aligned structure.

Milestone 4:

- Made necessary changes in the report along with adding limitations and future scope
- Added the assumptions used in the Clustering and Classification models
- Checked for any further improvement/scope needed in the project

Supritha Kulkarni

Milestone 1

- Created the project website, including the Introduction, Proposal Overview, and Team sections.
- Researched and gathered initial project ideas.

Milestone 2

- Performed data cleaning and handled missing values.
- Applied normalization and Principal Component Analysis (PCA).
- Identified and addressed anomalies and outliers.
- Updated the Data Exploration section on the website.

Milestone 3

- Implemented Frequent Pattern Mining (Apriori algorithm) to extract association rules among trade indicators.
- Conducted model evaluation using Accuracy, Precision, Recall and compared different analytical approaches.
- Updated the website with model results, visualizations, and detailed explanations.

Milestone 4

- Updated the website with the Conclusion section.
- Added the assumptions used in the Frequent Pattern Mining methodology.

Collaborative Effort

All team members contributed to regular discussions, interpretation of results, and refinement of the final deliverables. Decisions regarding model selection, preprocessing strategies, and result communication were made collaboratively.