

Predicting US Job Market Trends Using Economic Indicators

Group Number : 32

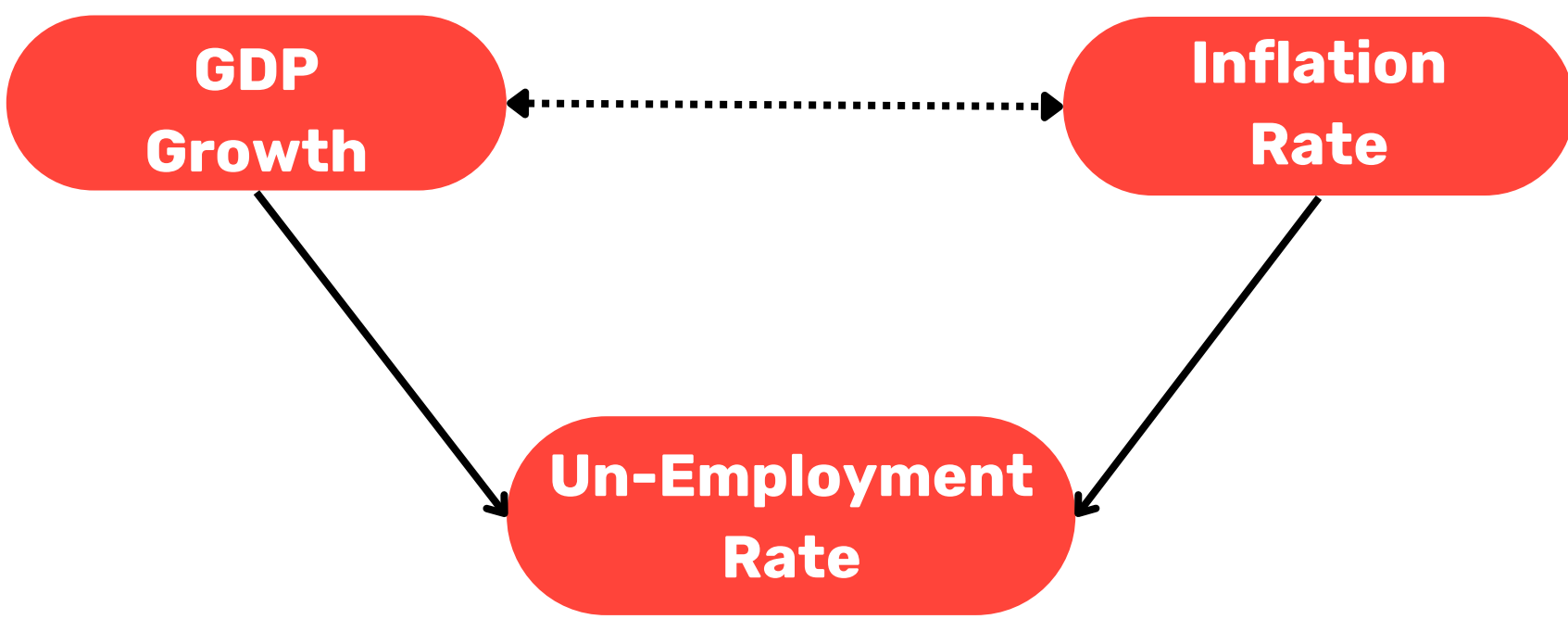
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RESEARCH QUESTION

“Can we predict future job market trends based on current economic indicators like unemployment rates, GDP, and inflation?”

MOTIVATION

- Helps policymakers shape monetary and fiscal policies.
- Guides individuals in making informed career choices.
- Predictive insights support employment, investment, and training decisions.



Data

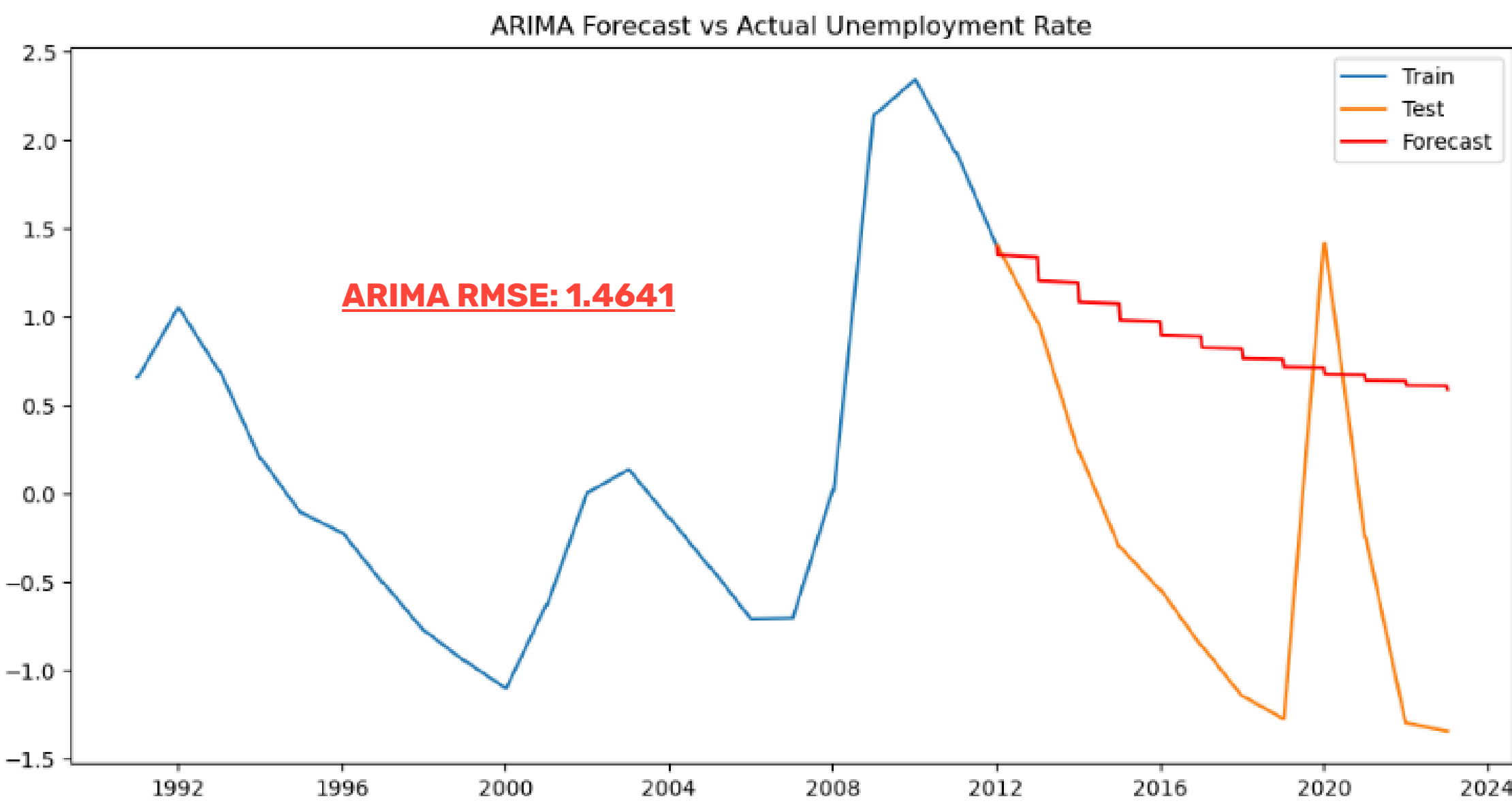
- Monthly economic data (1991–2023) sourced from [Kaggle](#).
- Key variables: Unemployment rate, GDP, Inflation.
- Preprocessing steps: Normalization, filtering.

Methods

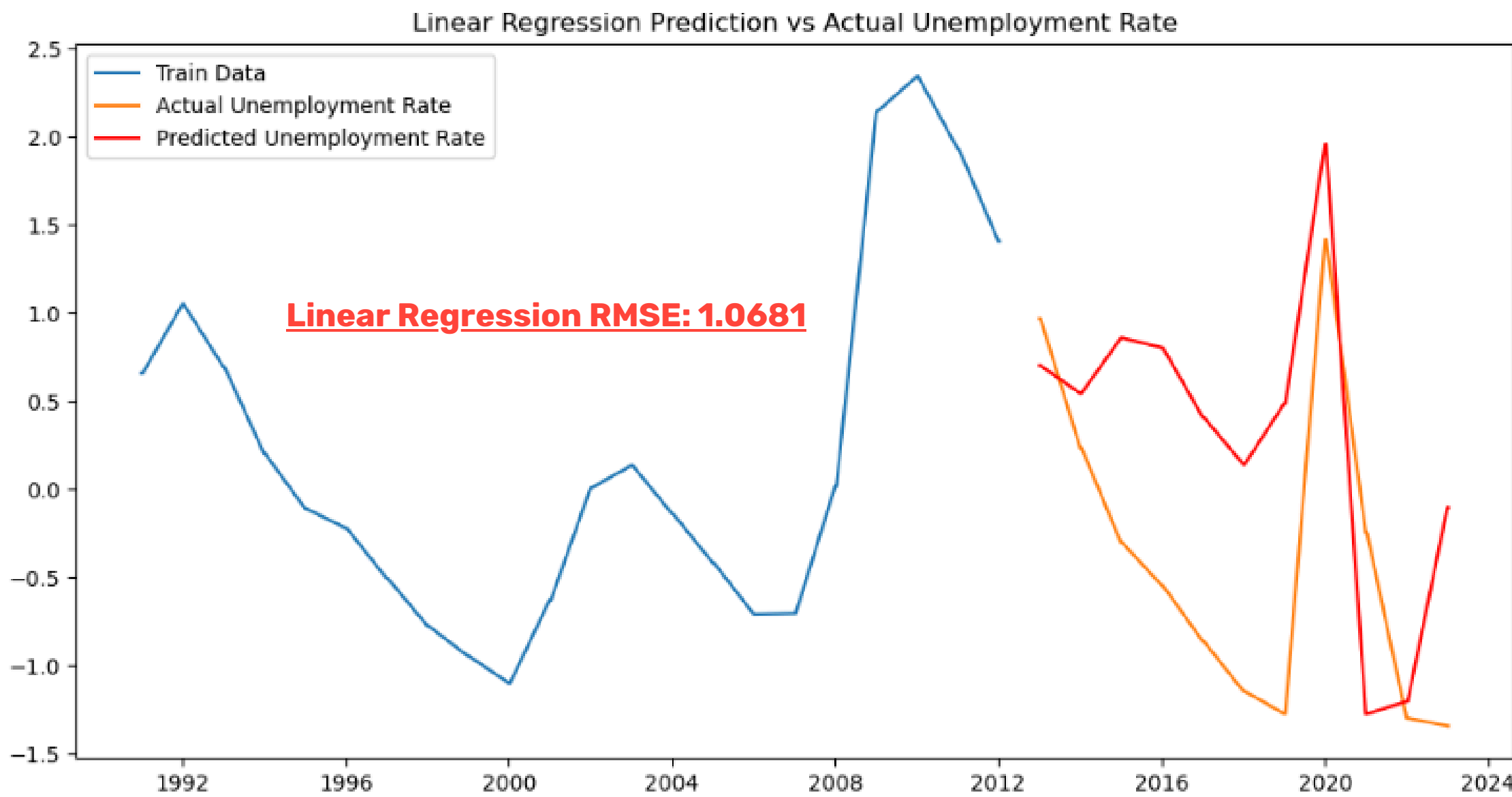
- ARIMA for time-series forecasting.
- Linear Regression for prediction using GDP and inflation.
- Correlation Analysis to assess relationships between variables.

Results

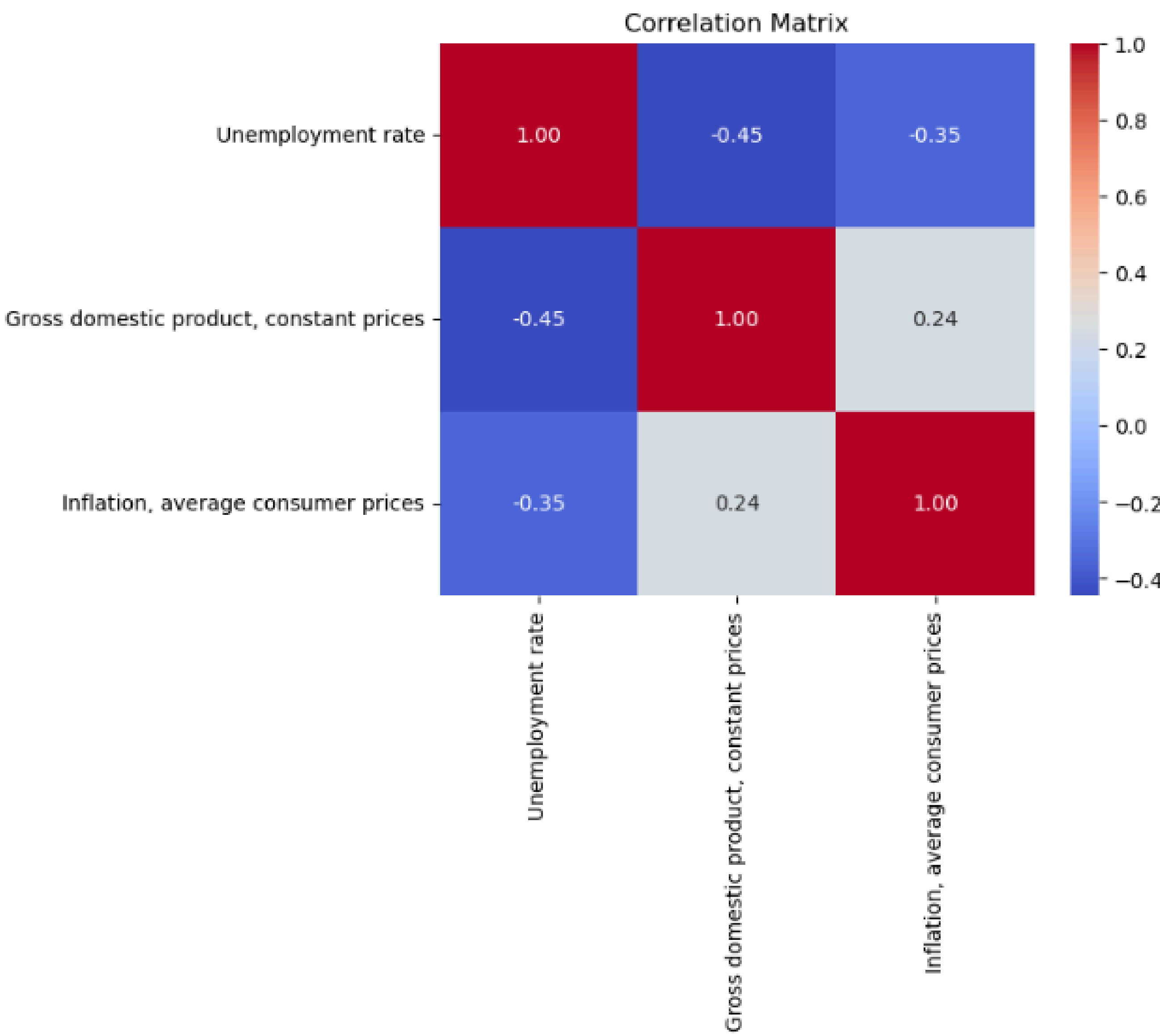
ARIMA Forecast



Linear Regression Prediction



Correlation Analysis



Considerations:

Other factors include technological advancements, labor participation rates, government policies, and global economic trends.

Conclusion

Finding	Implication
Strong GDP-Unemployment correlation	Guides policy decisions
ARIMA forecasts unemployment trends	Useful for long-term planning
Regression is more accurate	Better for short-term predictions