



The Defense Sector and Authoritarian Regime Changes - A Stock Analysis



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Problem Statement:

- Geopolitical events and the fortunes of defense industry stocks are linked.
- How do geopolitical events impact the stock market and vice versa?



Business Value:

- This analysis aims to provide insight into
 - The defense industry sector,
 - Lockheed Martin(LMT) stock and
 - the overall market.

Scaled Close of LMT Stock vs. Mean Average Magnitude Of Adverse Regime Changes

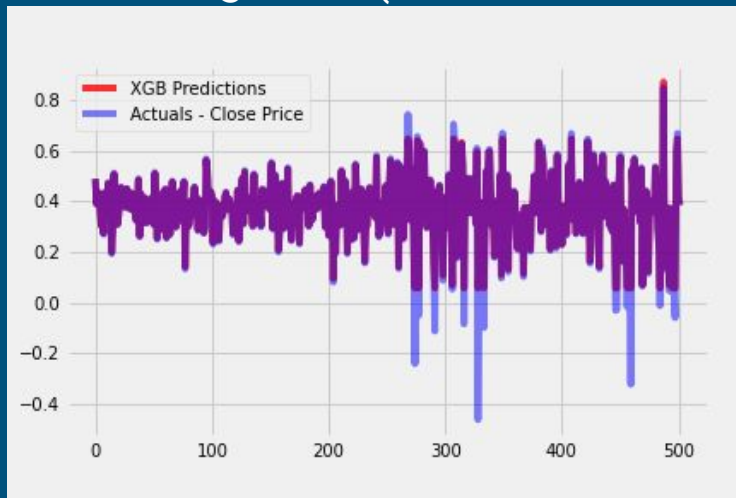


Time shifted mean average of magnitude of Adverse Regime Changes and LMT Stock

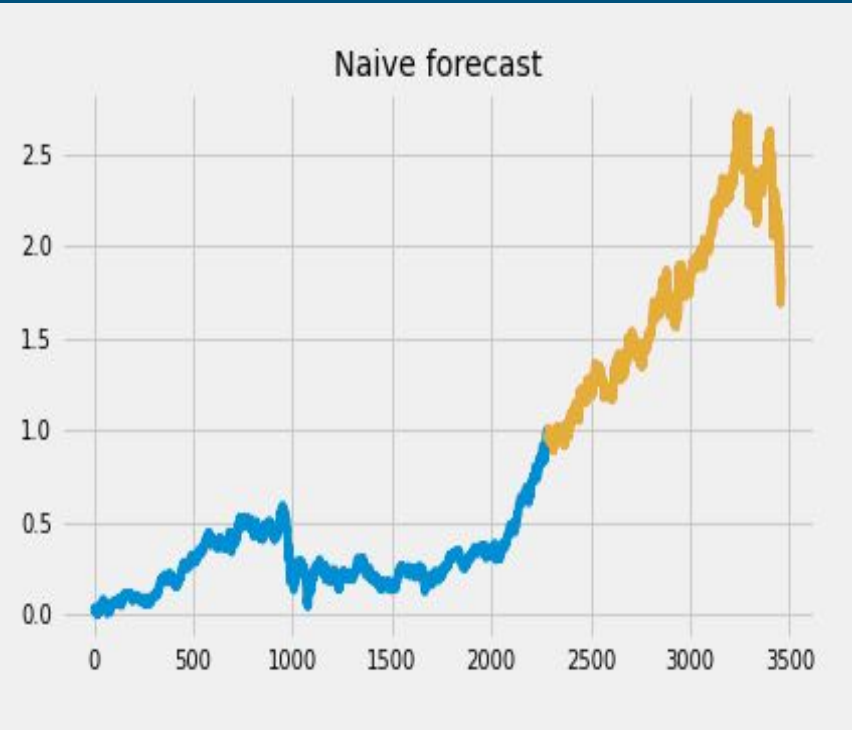


Methodology:

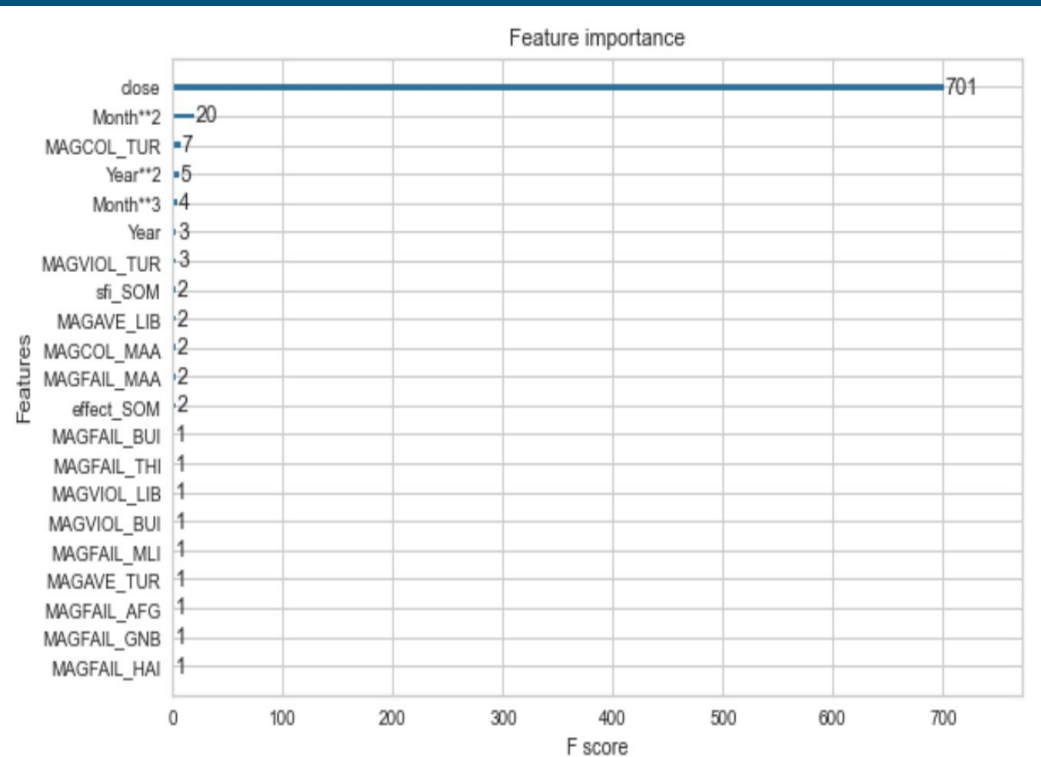
- Data was acquired from Center for Systemic Peace and stock market records.
- Analyzed with traditional techniques(VAR) before machine learning. FB Prophet and Gradient Boosting Trees(**0.0076 RSME vs. 0.026 baseline.**)



Business Recommendation 1: Follow Traditional Wisdom



Business Recommendation 2: Turmoil is good business



Business Recommendation 3: Timing is everything



Future Work/Next Steps

- Neural networks and unsupervised learning(Hidden Markov Machines)
- Anomaly detection and changepoint detection
- Examining more stocks and deploying as a web application

Thank you!
