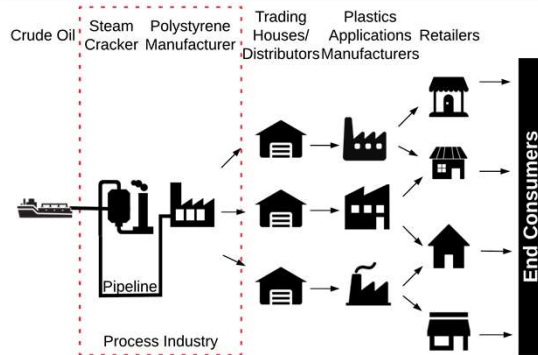


Improving Your Forecasts with NEMO

Motivation / Background



- Supply chain length affects lead time, which in turn affects:
 - Quantity of safety stock
 - Amount of information needed for forecasting
- B2B companies far upstream face **huge variability** as:
 - Uncertainty in demand forecasts is amplified each time information is passed along

Key Question / Hypothesis

- How can NLP techniques be applied to forecast the demand of B2B companies selling commodities in long supply chains?
- News articles contain sufficient information to apply NLP techniques to forecast the demand of B2B commodities accurately.

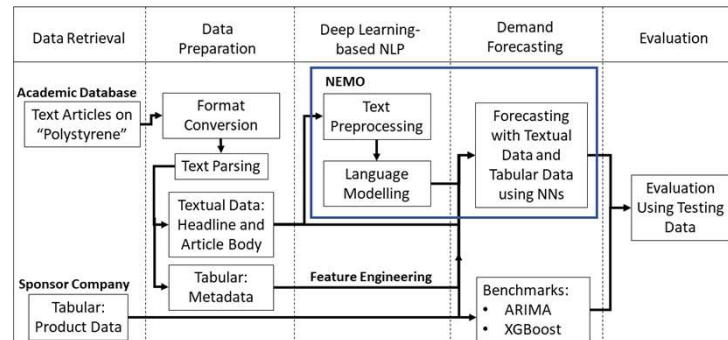
Relevant Literature

- Wood, L. C., Reiners, T., & Srivastava, H. S. (2015) – Exploring Sentiment Analysis to Improve Supply Chain Decisions
- Howard, J., & Ruder, S. (2018) – Universal Language Model Fine-Tuning for Text Classification

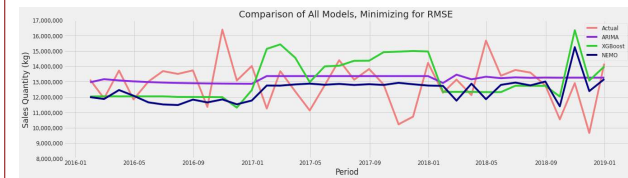
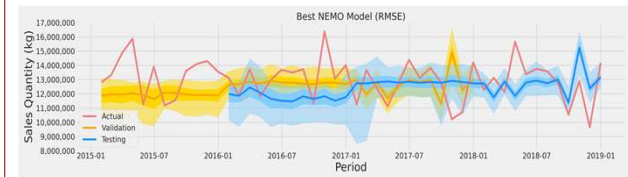
NEMO: Natural Language Processing-based Forecasting Model



Methodology



Results



Contribution

- NEMO is novel
 - Uses modern NLP techniques to forecast demand of a B2B commodity
 - Extracts hidden information from long text documents
 - Bypasses need for sentiment scoring, which is subjective
- NEMO can be used:
 - To sense end consumer demand – without depending on downstream companies to share information
 - To forecast upcoming demand volatility
 - For safety stock decisions
 - For B2C products or other types of data, such as audio, too

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