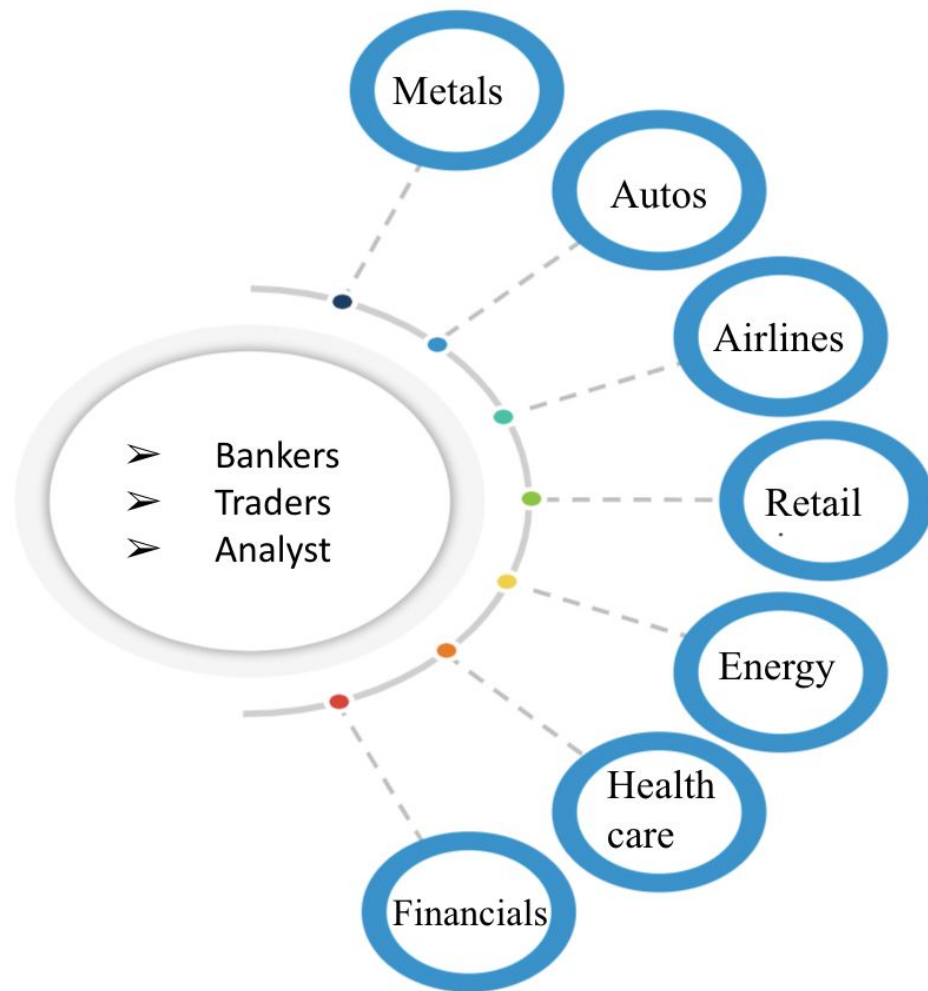


Finance Use Cases for NLP





2.5 Quintillion
Bytes



NLP Use Cases

Natural Language Processing



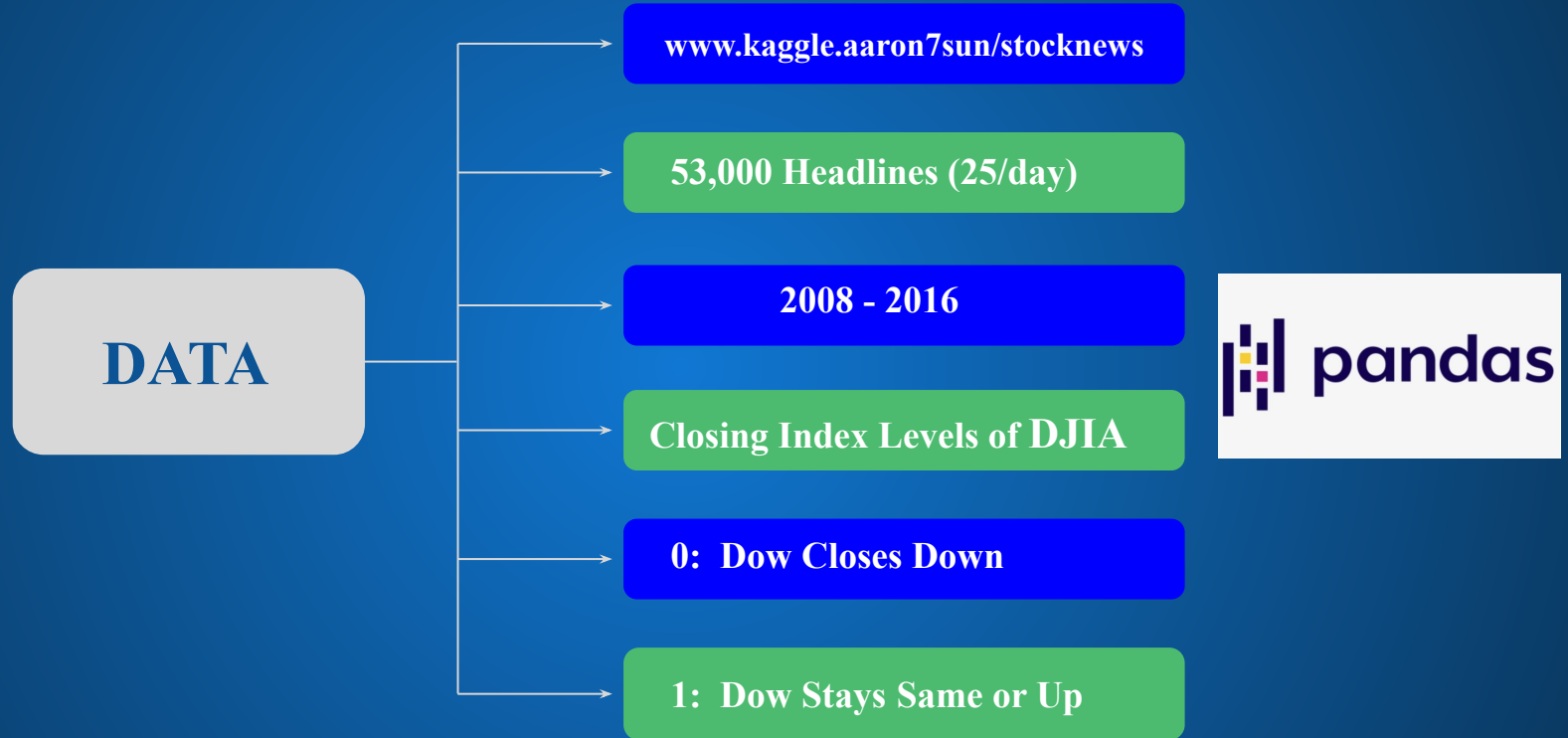
The diagram features a central blue circle with the text 'Natural Language Processing'. Two large, semi-transparent rectangular blocks branch out from the right side of this circle. The top block is dark purple and contains the text 'Supervised Learning' and 'Classification'. The bottom block is light gray and contains the text 'Unsupervised Learning' and 'Topic Modeling'. The entire diagram is set against a dark blue background.

Supervised Learning

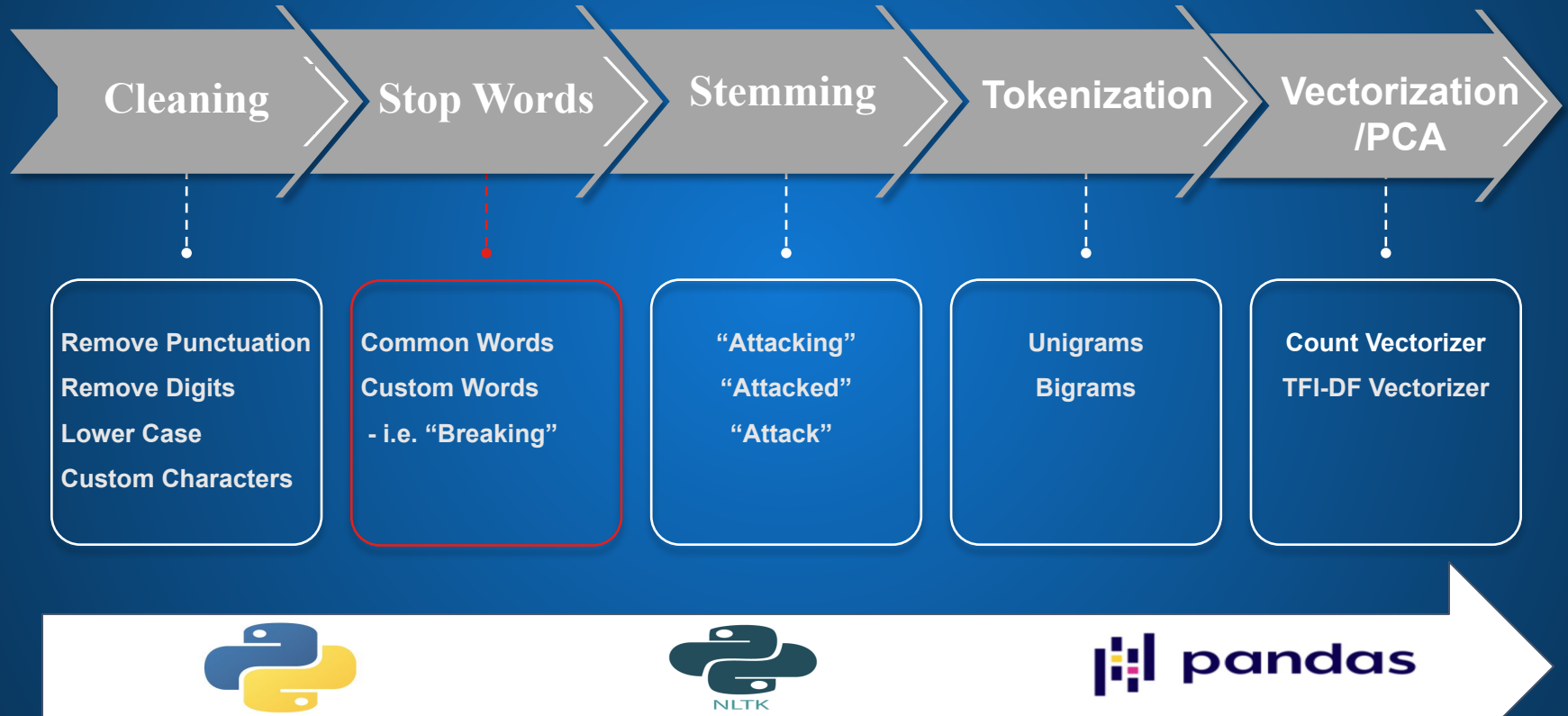
Classification

Unsupervised Learning

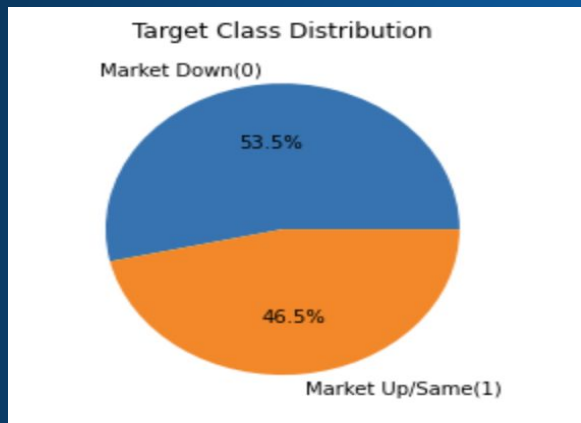
Topic Modeling



Data Preprocessing Work Flow



Stock Prediction



Accuracy



0.55



0.50



0.43

DATA PITFALLS

- Exact time of release
- Market already down or up
- Algorithm misinterprets headline
- Article recycled

Topic Modeling

HEADLINES FROM 08-08-2008 to 09-31-2008

TOPIC 1		
Russia	Georgia	Military
War	China	Year

TOPIC 2		
Korean Leader	Korean	Militants
Al Queda	North Korean	Afghanistan

TOPIC 2



2008 korean leader



Is the leader of North Korea still alive?



Feedback

<https://www.nytimes.com> › World › Asia Pacific



✓ North Korea's Leader Is Seriously Ill, U.S. Intelligence Officials ...

Sep 9, 2008 — The North **Korean leader** Kim Jong-il might have suffered a stroke weeks ago, an intelligence official said Tuesday.

<https://www.nytimes.com> › World › Asia Pacific



✓ North Korean Leader Had Surgery After Stroke, South ...

Sep 10, 2008 — North **Korea's leader**, Kim Jong-il, flanked by his confidants Kim Yong-nam, left, and Jo Myong-rok in a 2005 photo taken by a ... 10, 2008.

TOPIC 1



2008 russia georgia war



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Images

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About 45,200,000 results (0.72 seconds)

https://en.wikipedia.org/wiki/Russo-Georgian_War

✓ Russo-Georgian War - Wikipedia

April–July **2008** — The Russo-Georgian **War** was a **war** between **Georgia**, **Russia** and the Russian-backed self-proclaimed republics of South Ossetia and Abkhazia.

Russia: 7th Novorossiysk Air Assault Division **Abkhazia:** Armed Forces (land and air force...

[Cyberattacks during the Russo...](#) · [Financial market reaction to...](#) · [Don Cossacks](#)

People also ask

Is Georgia still occupied by Russia?



When was the Georgian Russian war?



Why did the Russian military invade Georgia in 2008 quizlet?



When did Georgia separate from Russia?



Future Work

- Immediate market impact
- Predict size of movements
- Create desk-top application
- Incorporate into existing financial platforms/applications

Thank you!



Appendix

Confusion Matrix for Optimal Model

