Public Sentiment Toward AI: Comparing Twitter Before and After the Launch of Generative AI

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Motivation & Hypothesis

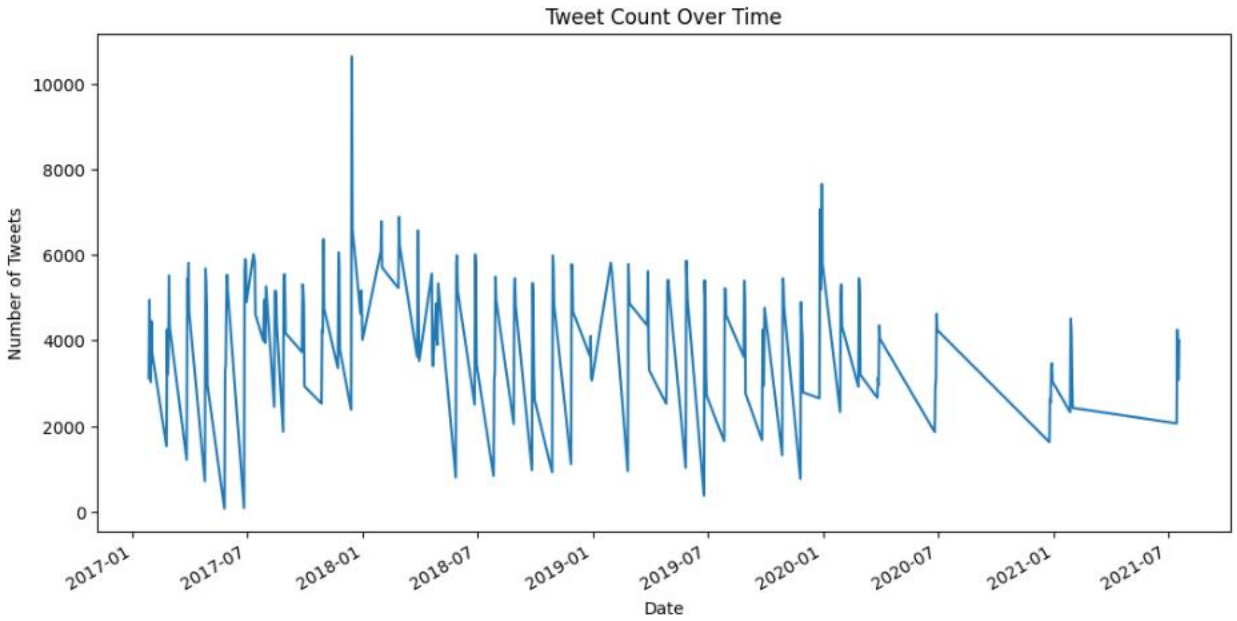
Hypothesis: Public sentiment towards AI have become more positive after GenAI

- After the launch of ChatGPT, there has been a surge in popularization of AI tools
- Use sentiment analysis models to categorize text

Datasets

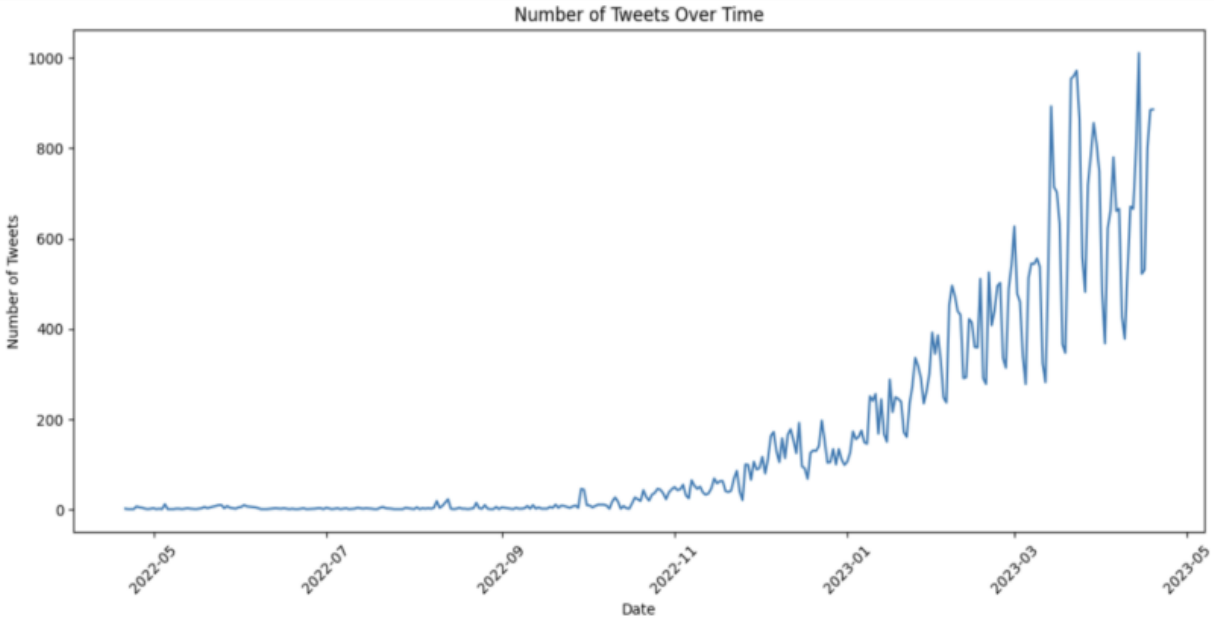
Pre Gen-AI Dataset (2017 - 2021)

- Hardvard Dataverse
- Text based tweets + metadata
- 893,076 Samples



Post Gen-AI Dataset (2022 – 2023)

- Github Repository
- Text based tweets + metadata
- 56,221 Samples



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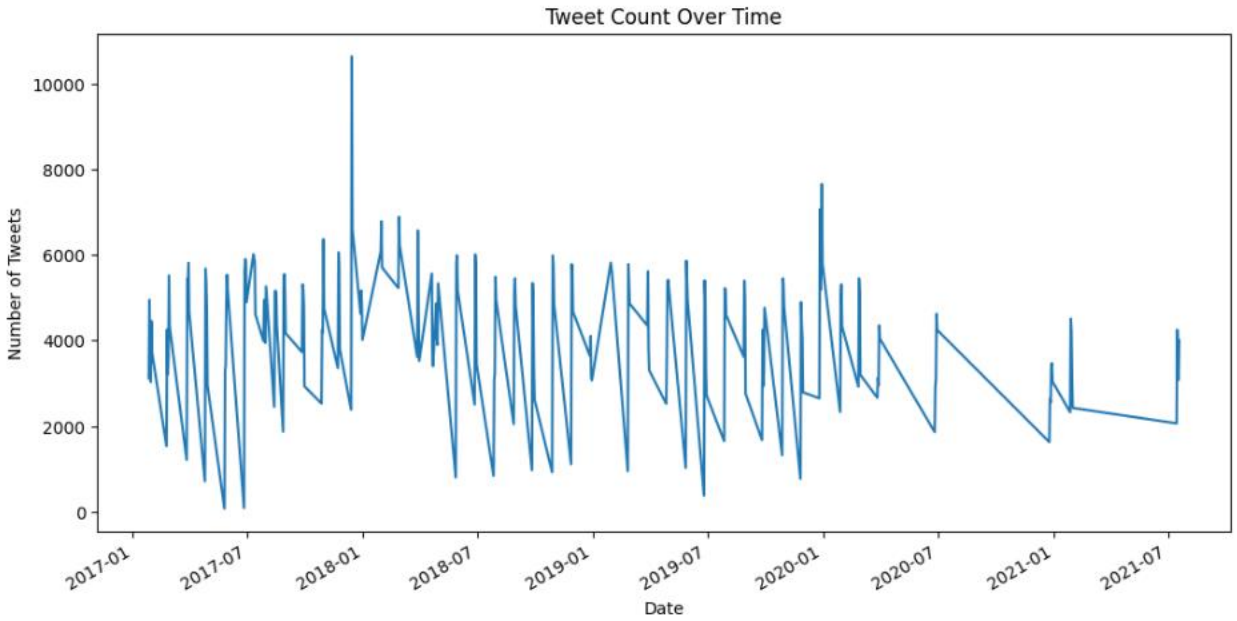
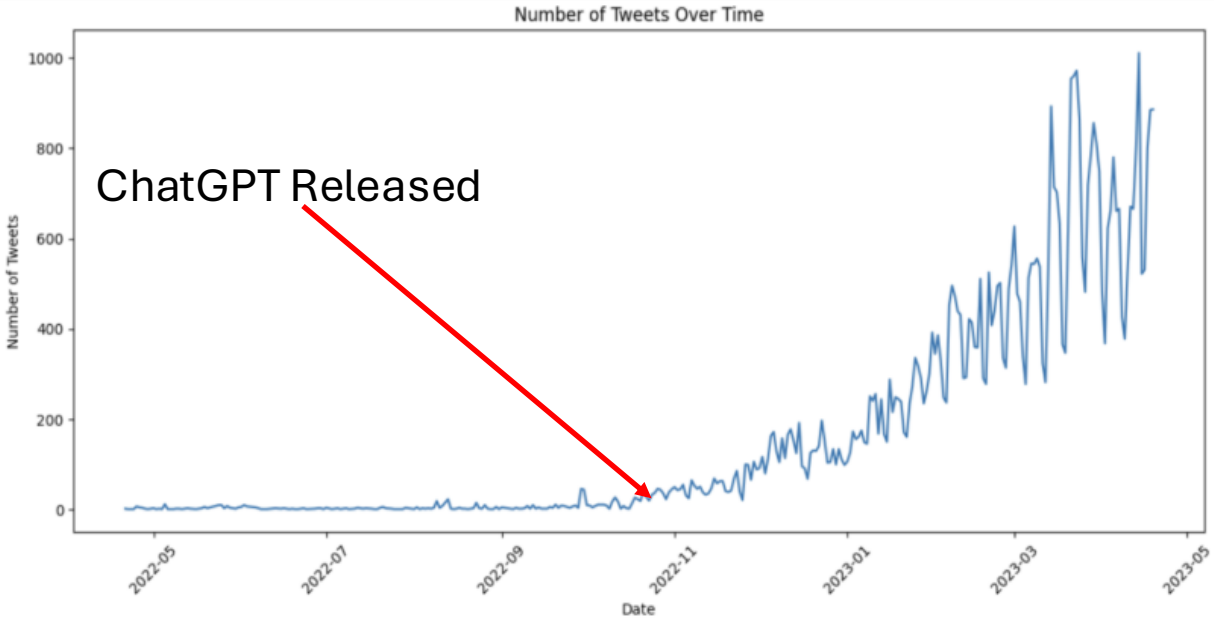
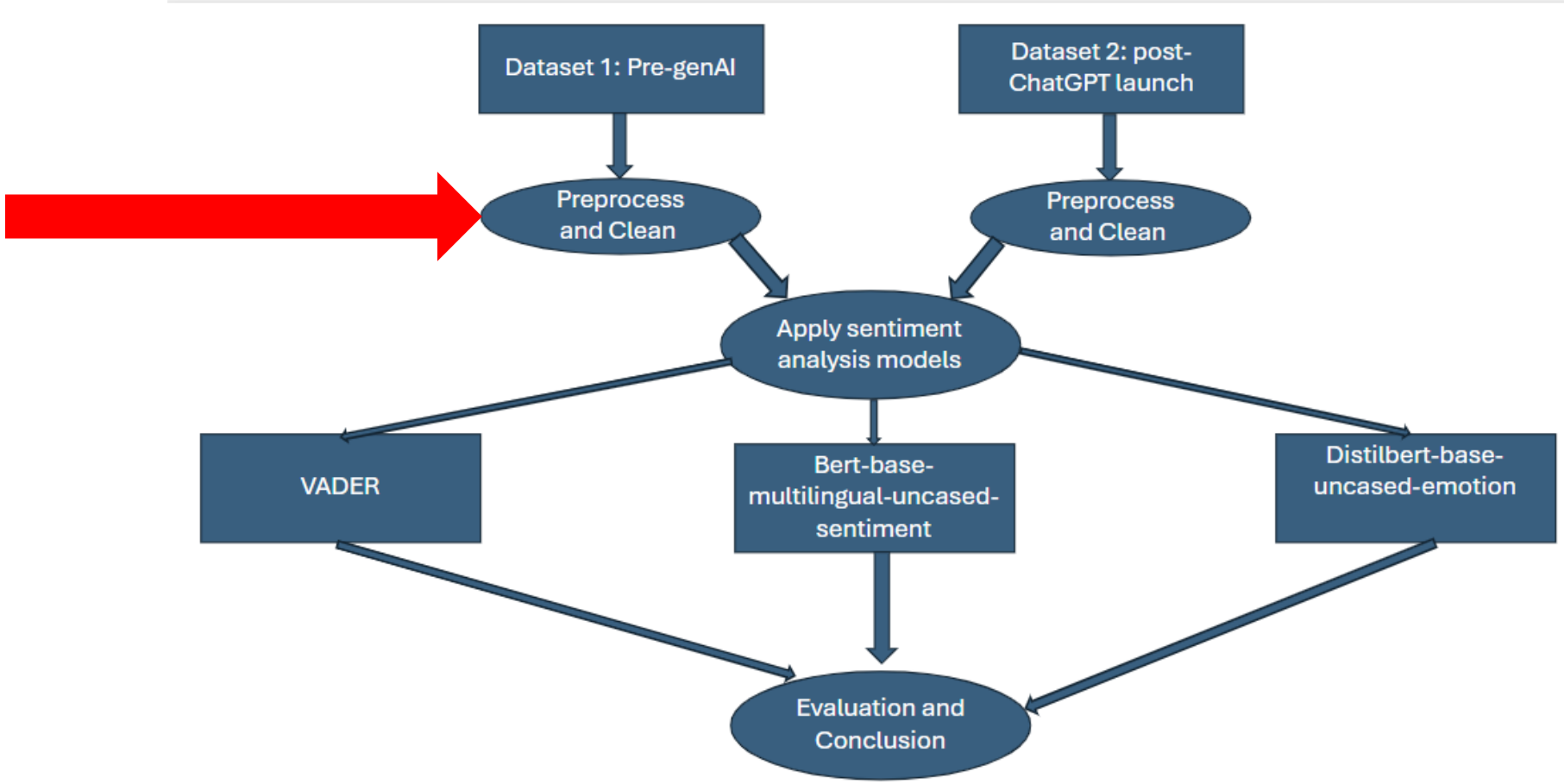




Analysis Plan



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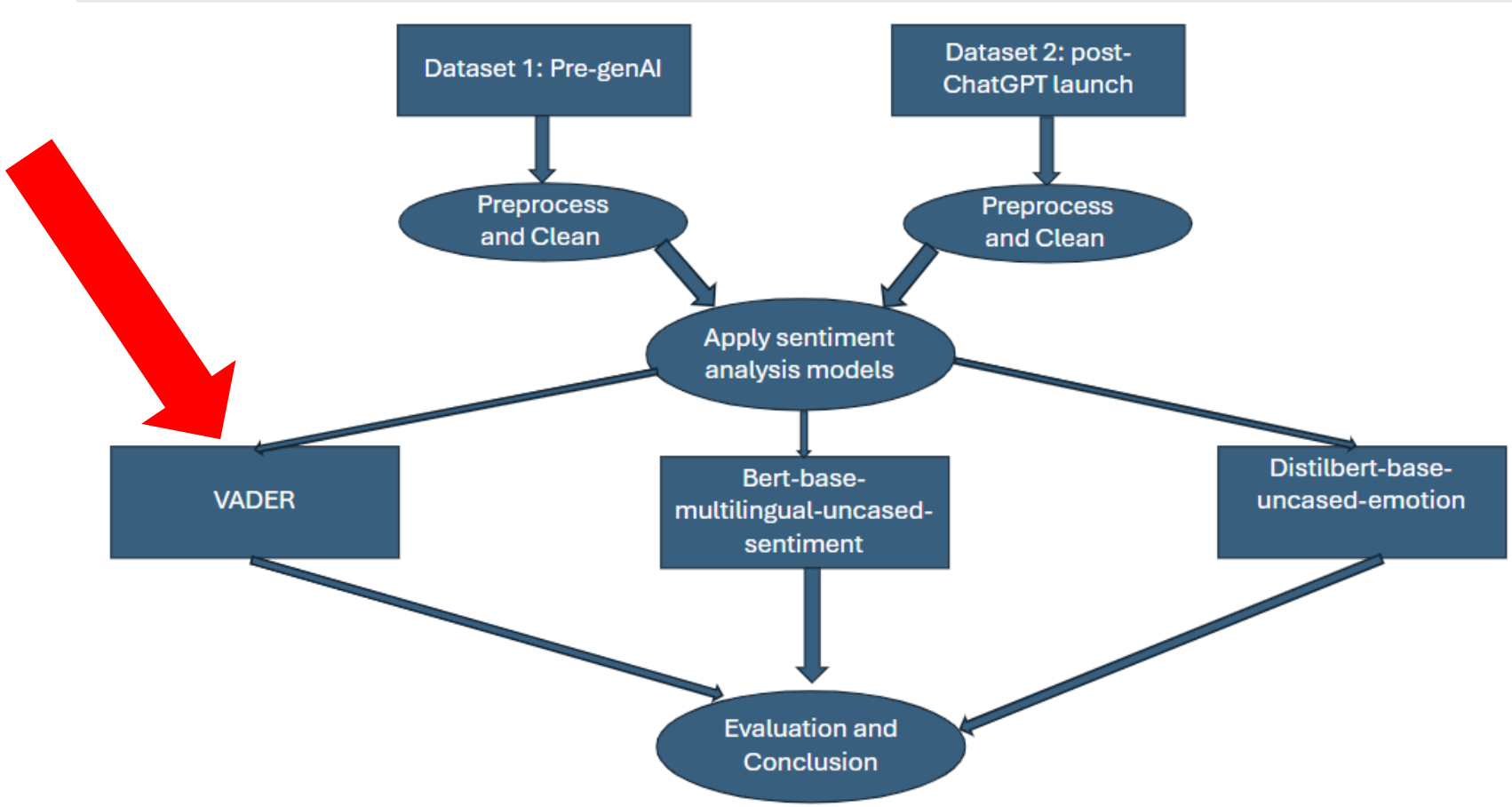

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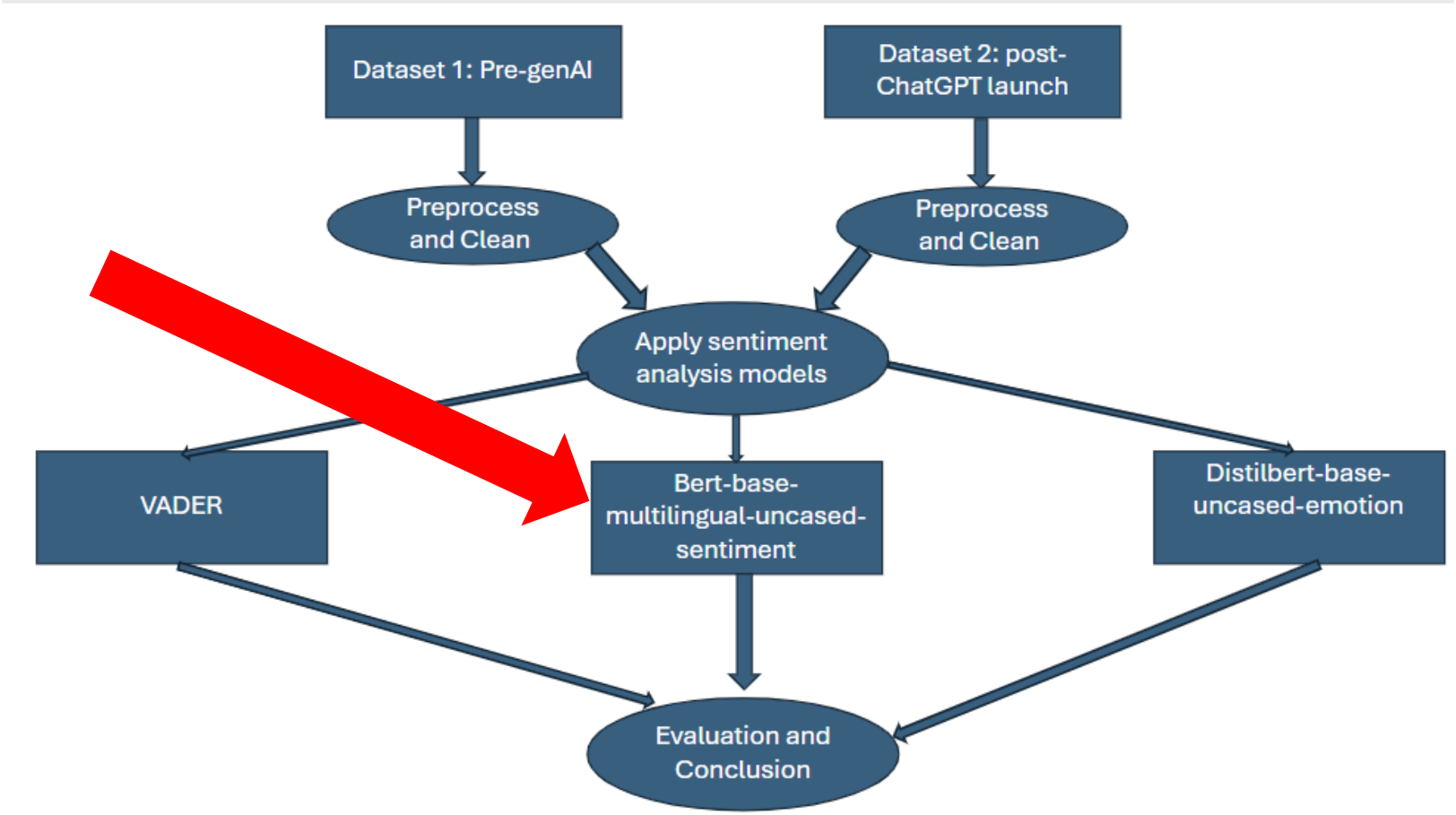

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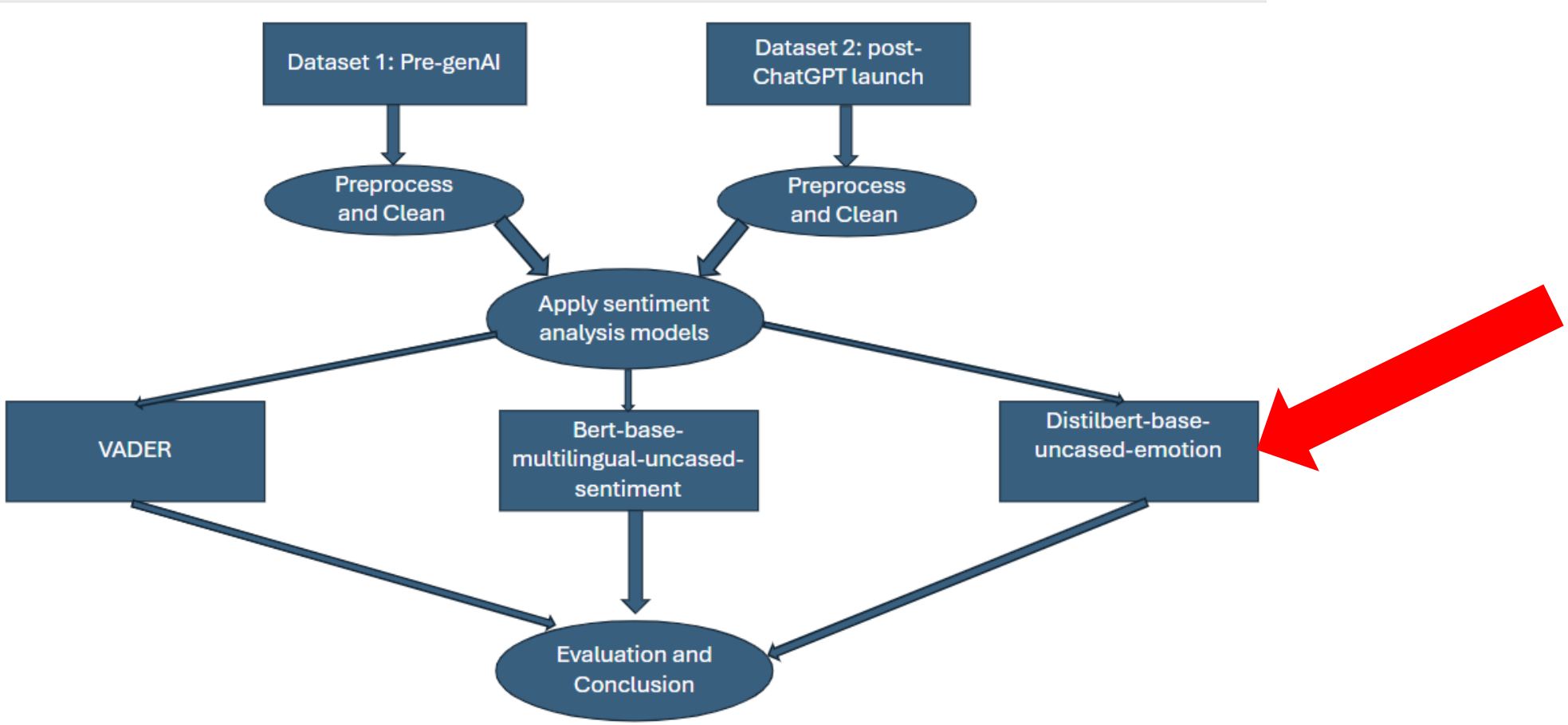

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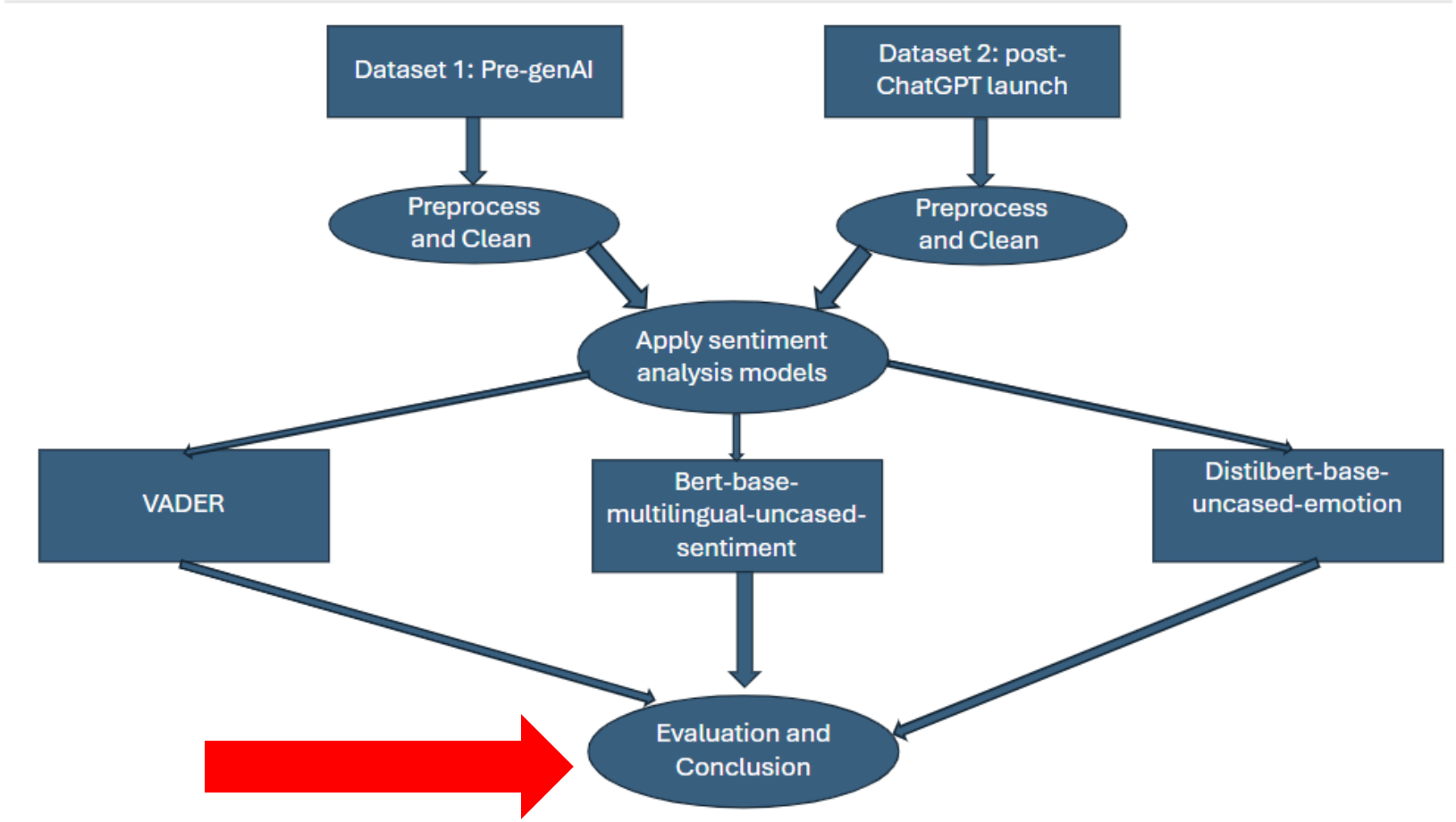

Tricky Analysis Decision

- Categorizing emotions as positive or negative
- Deciding which models to use

Bias and Mitigation

- **Bias**
  - Twitter are not a representation of the whole population
  - Social media posts are usually polarized
  - Model training data

Bias and Mitigation

- Bias
  - Twitter are not a representation of the whole population
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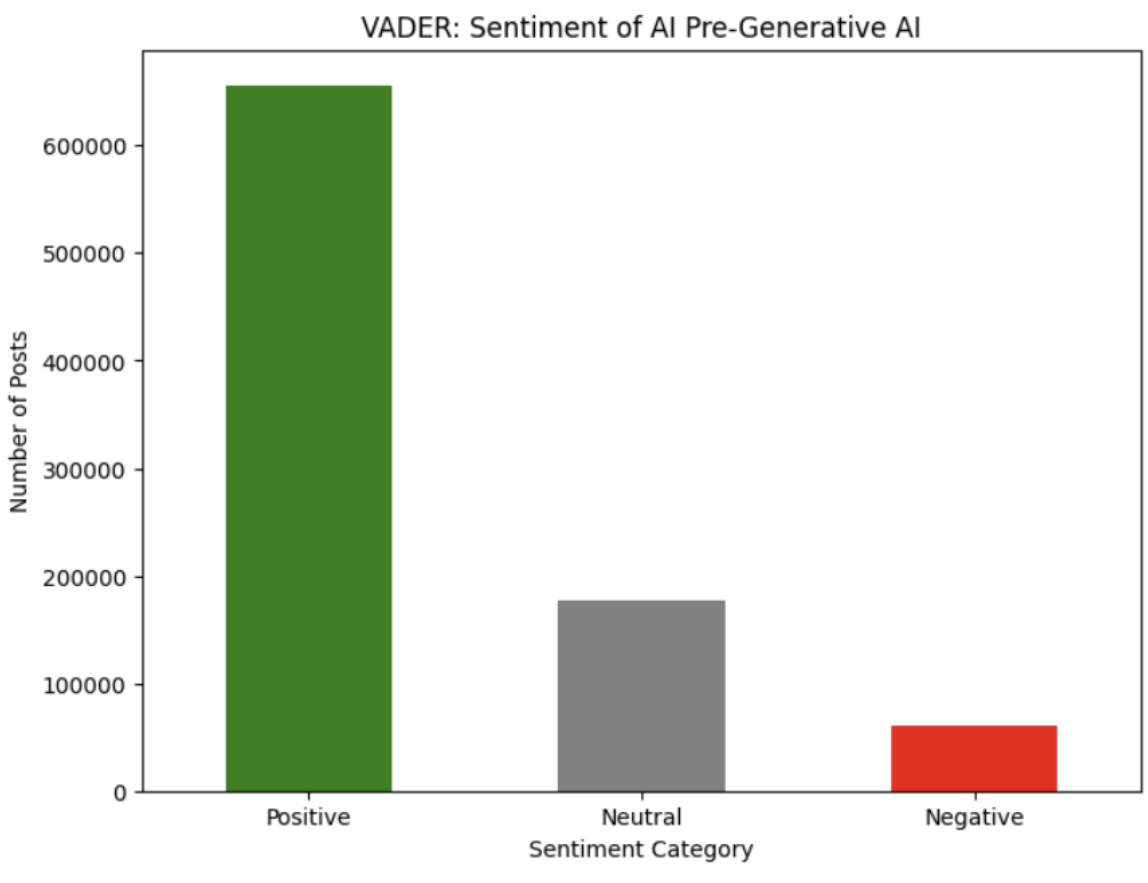
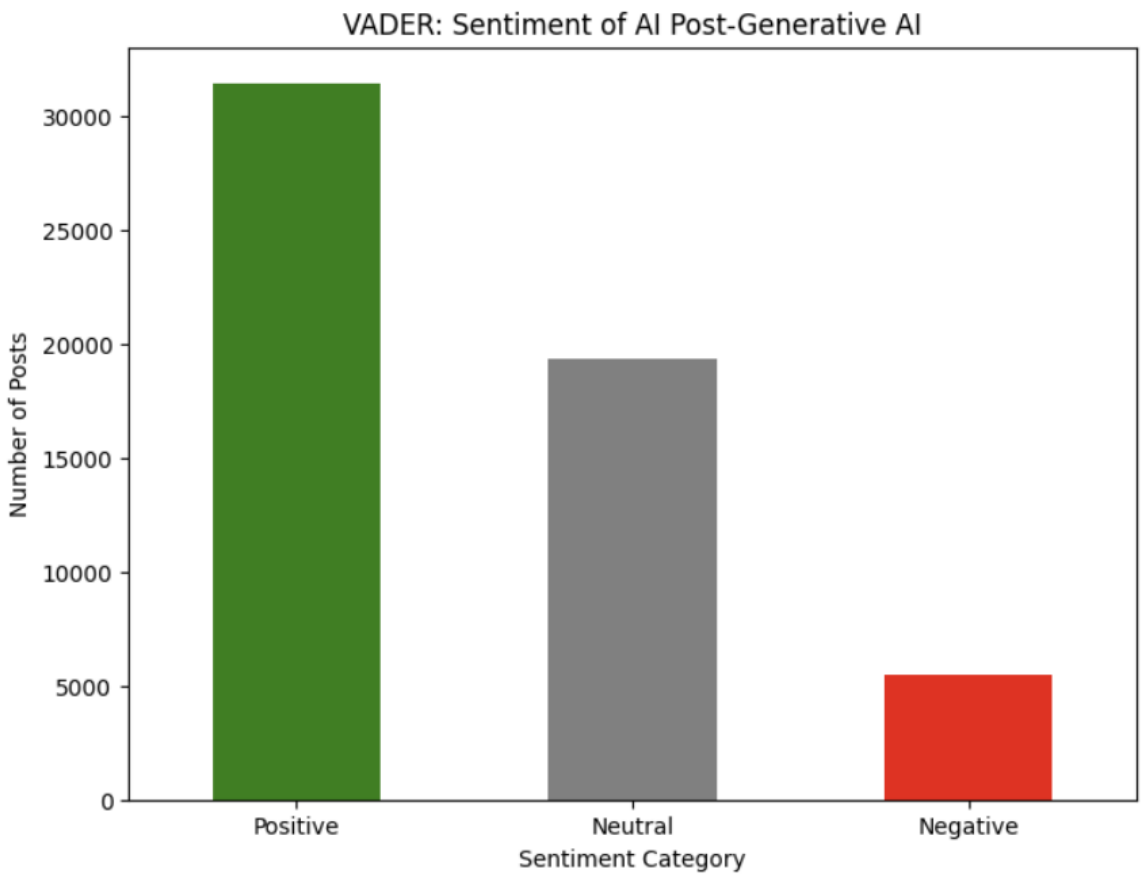
  - Model training data
- **Mitigation**
  - Using multiple models trained on diverse data and methods
  - Comparing aggregated results

Results - VADER

Pre GenAI

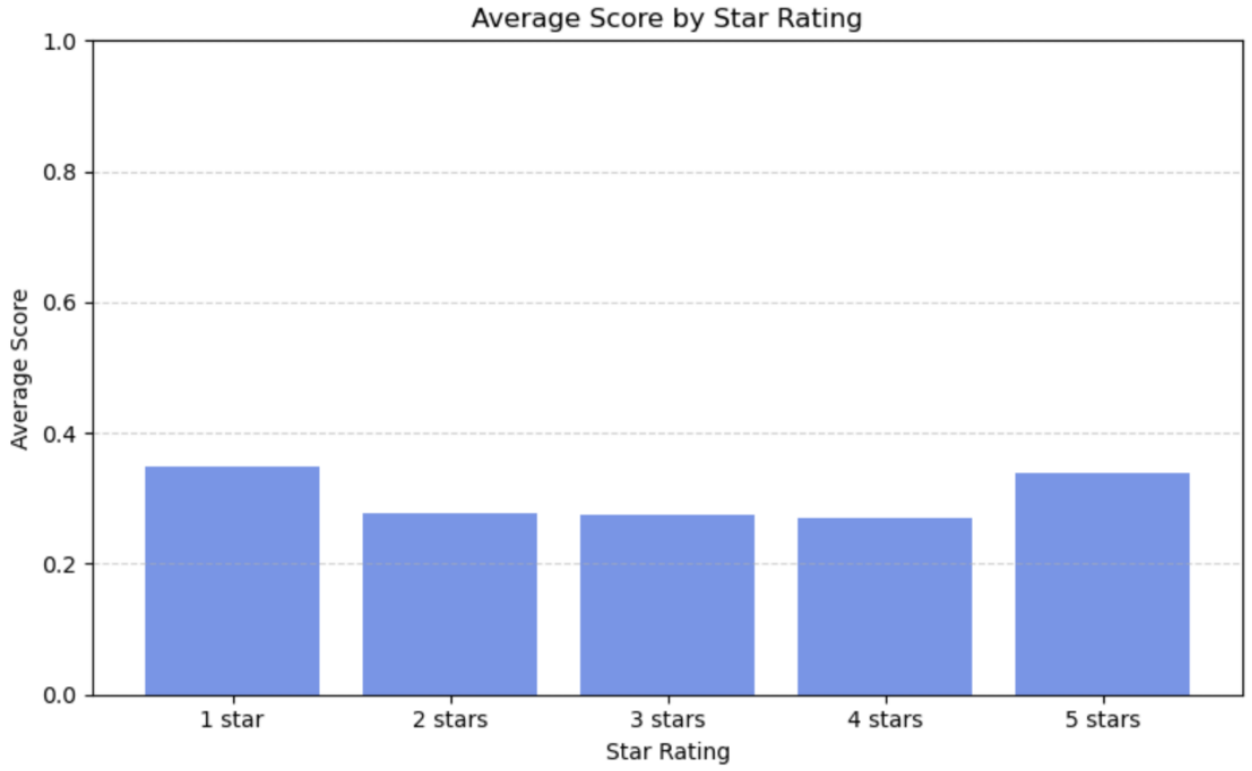


Post GenAI



Results - Bert

Pre GenAI



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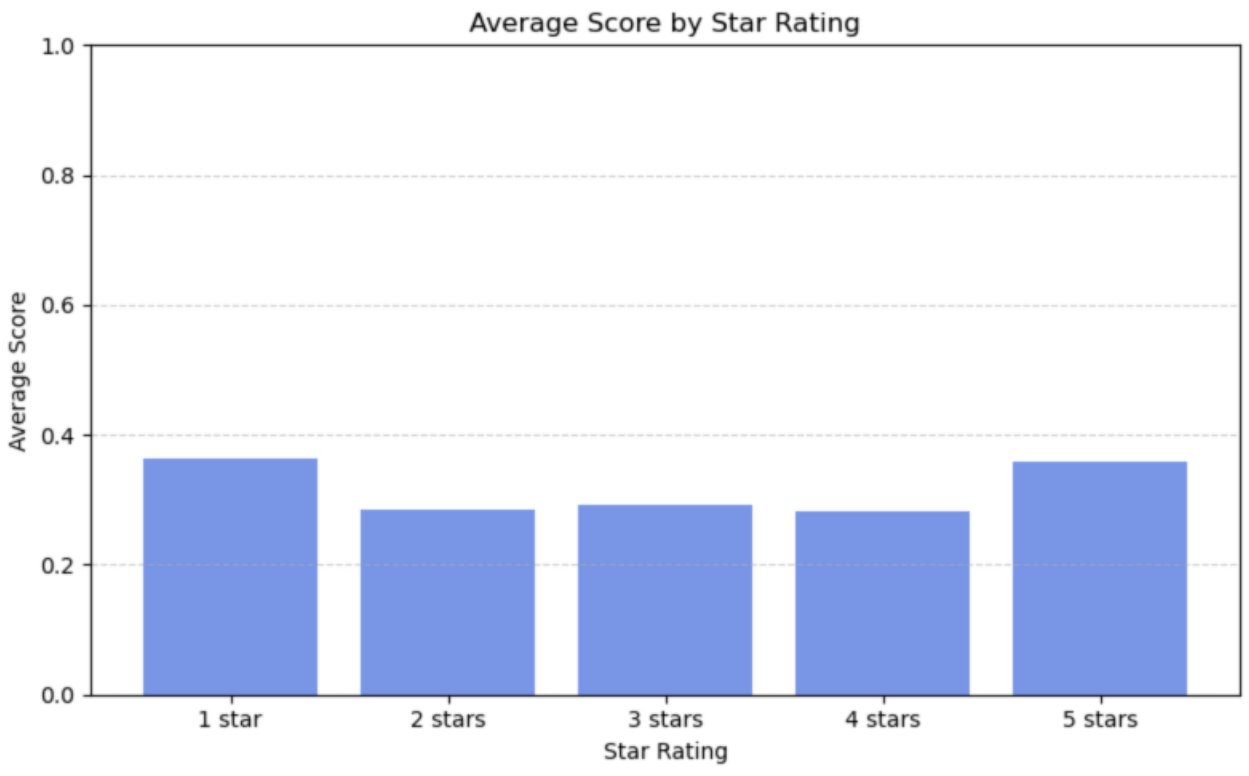
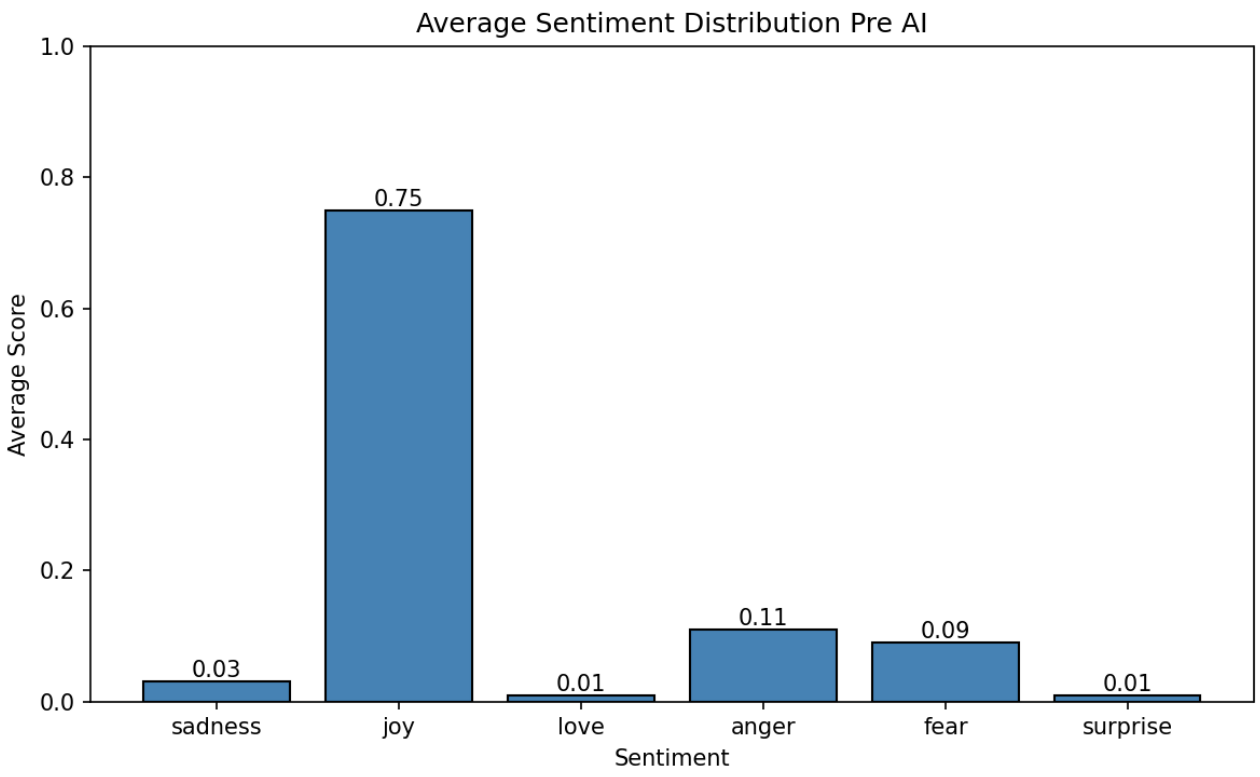


Results - Distilbert

Pre GenAI



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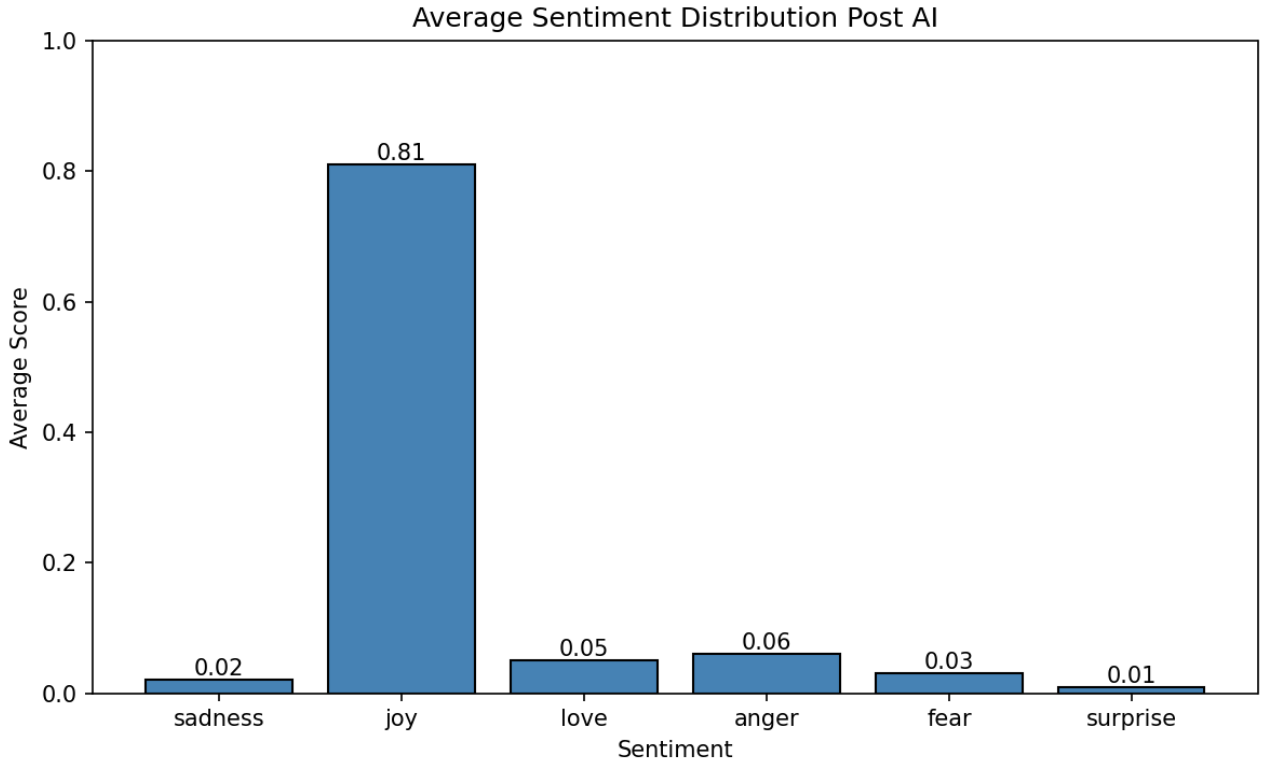

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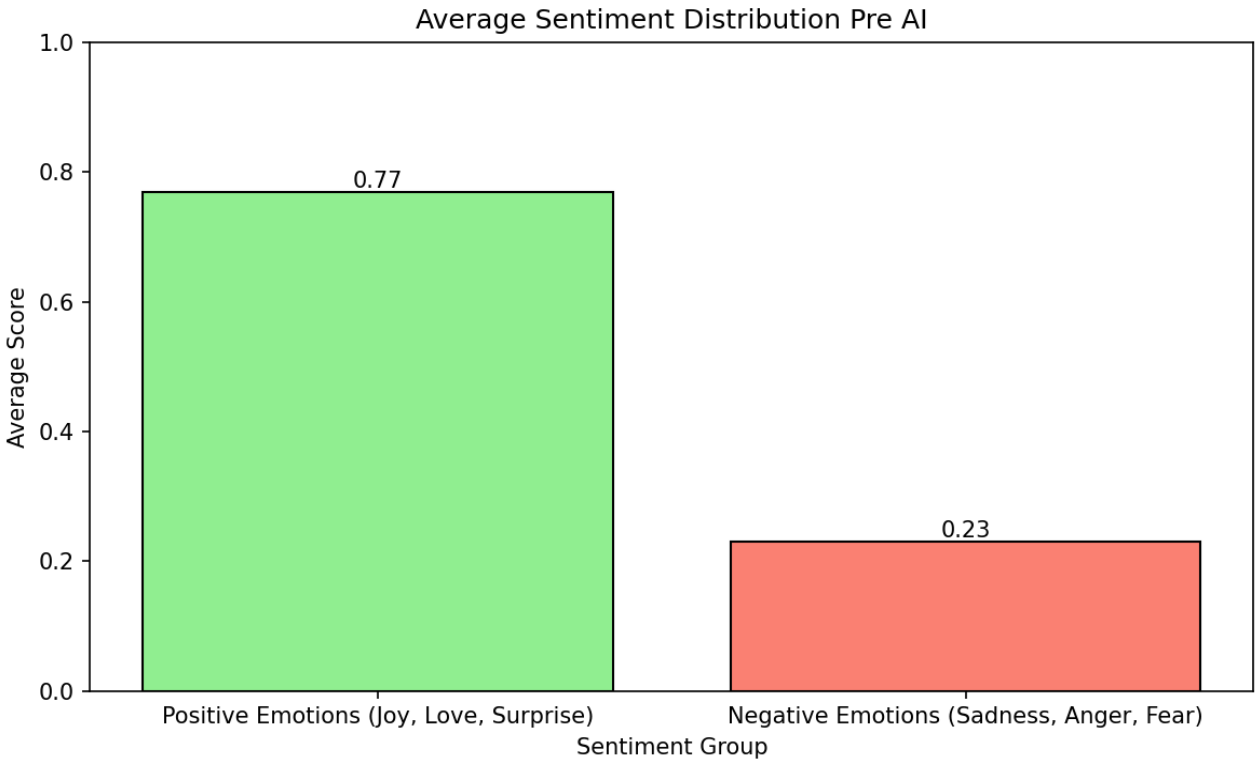

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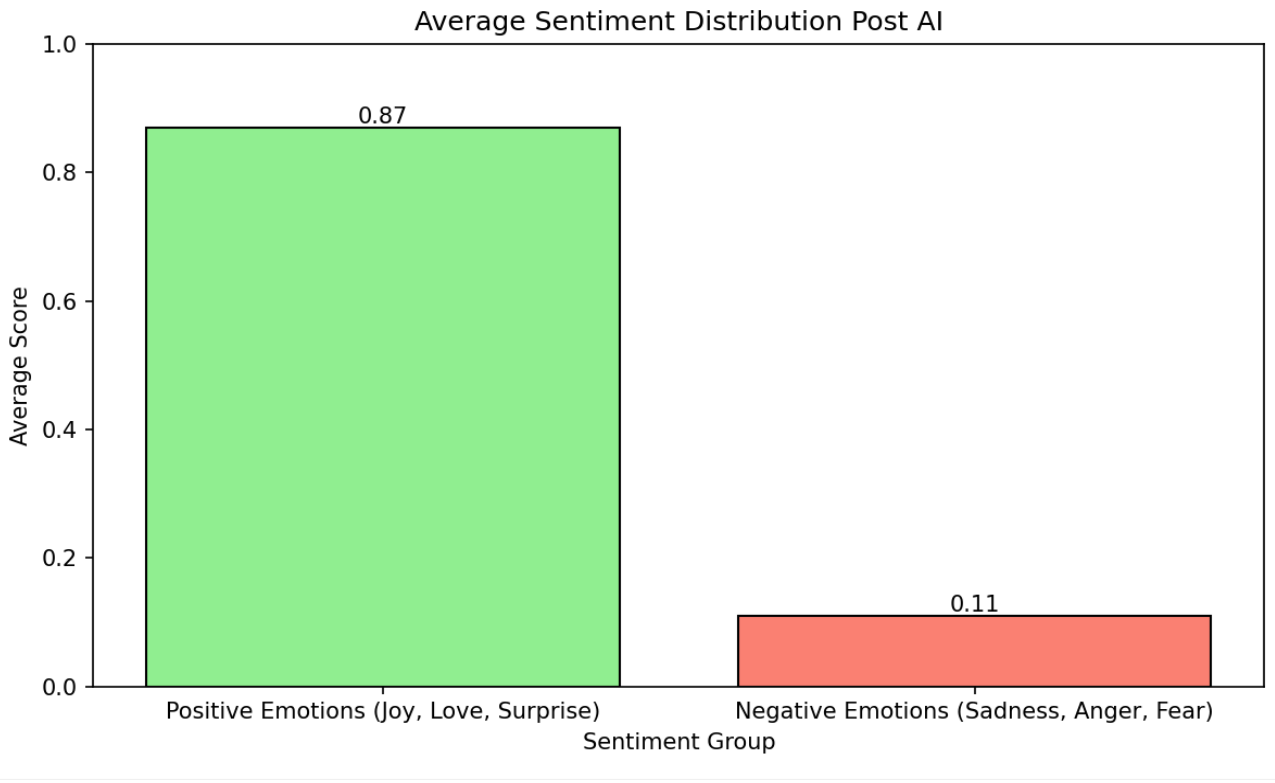

Next Steps

- Expand dataset to more media
- Apply fine-tuned models for better accuracy

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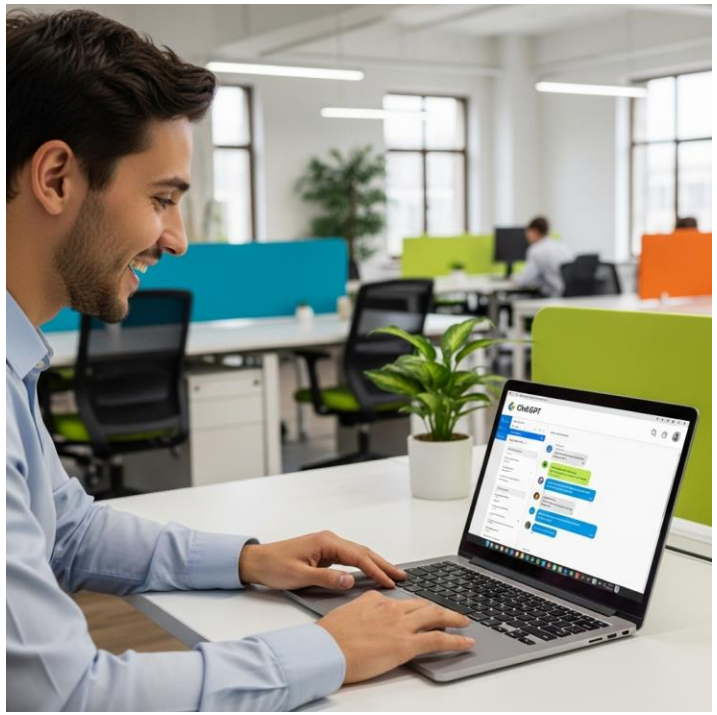
Thank You



ChatGPT