**Literature Review Outline by Vasilisa Lukashevich**

The topic I have chosen is “*Implementing Deep Learning tools and techniques to detect political misinformation on social media platforms*”.

Here is the conceptual framework of the future paper:

**Introduction**

- Importance of addressing political misinformation on social media

*(Why are we have this conversation now?)*

- Identify a significant research gap: **there is currently** **no existing research paper specifically addressing this topic**. However, we can leverage *related papers* to make comparisons in the following areas:

1. Disinformation/misinformation.

2. Political news/news in general (fake news being the most popular topic among scholars).

3. Machine learning/deep learning.

**Understanding Political Misinformation**

- Definition of political misinformation

- Disinformation and misinformation difference

- Impact of political misinformation on public opinion and democratic processes

- Political news/news in general + fake news + propaganda problem

- Approaches to misinformation detection (from traditional fact-checking through its limitations to automated and scalable solutions)

**Deep Learning Techniques for Fake News Detection**

- ML and DL difference

- Overview of deep learning and its applications in natural language processing

- Text classification and topic modeling for identifying political bias

**Dataset Creation**

- Challenges in collecting and annotating data for training deep learning models

- Existing datasets for fake news detection

- Considerations for designing a reliable and diverse dataset

**Deep Learning Models for Misinformation Detection**

- Convolutional Neural Networks (CNN)

- Recurrent Neural Network (RNN)

- Long-Short Term Memory (LSTM)

- A hybrid CNN-RNN

- Geometric DL

- Transformer models (e.g., BERT, GPT) for contextual understanding and language generation.

**Evaluation Metrics and Performance Analysis**

- Metrics used to evaluate the performance of deep learning models

- Comparison of different models and techniques

- Challenges in assessing the effectiveness of misinformation detection systems

**Ethical and Privacy Considerations**

- Implications of using deep learning for misinformation detection

- Privacy concerns related to data collection

- Ethical considerations in content moderation and algorithmic bias

**Future Directions and Challenges**

- Potential advancements in deep learning techniques for detecting **political** misinformation (*aimed at distinguishing political topics from others using keyword analysis*)

**Conclusion**

- Summary of key findings and contributions

- Areas for further research and development