**Please feel free to edit as necessary.**

**Objectives for optimization**

* **Sentiment Analysis:** Utilize **BERT** to analyze the emotional content of a collection of folk tales.
* **Story Generation:** Leverage **GPT-2** to generate new stories based on the dominant sentiment identified in the input text.
* **Challenges:** Address the limitations of working within free computational resources while attempting to produce high-quality, machine-generated stories.

**Project Workflow**

1. **Sentiment Analysis with BERT:**
   * We began by feeding a dataset of folk tales into **BERT**, a model known for its deep understanding of language nuances.
   * The model was tasked with categorizing each story based on its emotional tone into one of five categories: "very negative," "negative," "neutral," "positive," and "very positive."
   * The analysis results allowed us to identify the most prevalent sentiment in the dataset.
2. **Story Generation with GPT-2:**
   * Using the dominant sentiment as a foundation, we crafted a prompt to feed into **GPT-2**, a model designed for generating text.
   * The GPT-2 tokenizer converted the prompt into tokens that the model could process.
   * Parameters such as beam search and no\_repeat\_ngram\_size were fine-tuned to optimize the output and reduce repetition, aiming to generate a coherent and unique story.
3. **Challenges Encountered:**
   * Due to limitations in computational resources provided by free platforms, we faced significant challenges in achieving the desired output quality.
   * The stories generated by GPT-2 were often disjointed, repetitive, and lacked the coherence we aimed for, highlighting the need for more powerful hardware to train such models effectively.

**Key Learnings**

* **Understanding BERT and GPT-2:** This project provided valuable insights into the strengths and limitations of using BERT for sentiment analysis and GPT-2 for text generation.
* **Resource Constraints:** The limitations of free computational resources were a significant barrier to achieving our goals.