**AIDI-2003-02: Consulting and Professional Communication**

**Text Generation Application Report**

**Group 12**

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**Problem Identification:** The Text Generation Application aims to provide users with an interactive platform to generate coherent and contextually relevant text based on user-defined prompts. The challenge lies in harnessing the power of language models to produce meaningful and coherent text while respecting user-specified word limits.

**Language Model Selection:** The application employs the **transformers** library, which provides pre-trained language models for various natural language processing tasks. In this implementation, the GPT-2 model is used due to its ability to generate high-quality text based on a given prompt.

A screenshot of a computer

Description automatically generated

**Technical Explanation:** The application utilizes the Gradio library to create a user-friendly interface. Users input a prompt and specify the desired word limit for the generated text. The application then uses the GPT-2 model to generate text and applies post-processing to ensure the output adheres to the specified word limit.

1. The user provides a prompt and sets a word limit.
2. The application processes the input using the GPT-2 model for text generation.
3. The generated text is obtained and trimmed to the specified word limit using post-processing.
4. The user receives the contextually coherent generated text as output.

A screenshot of a computer

Description automatically generated

**Evaluation Metrics:** The primary evaluation metric for this application is the coherence and relevance of the generated text to the given prompt. Additionally, the word limit adherence is measured to ensure that the generated text conforms to user expectations.

**Limitations and Ethical Considerations:**

1. **Limited Context Understanding:** While GPT-2 is proficient in text generation, it lacks deep understanding of context, which can lead to occasional irrelevant or off-topic responses.
2. **Bias and Inappropriate Content:** Language models may inadvertently generate biased or inappropriate content based on the training data. Content moderation mechanisms should be implemented to mitigate these risks.
3. **Resource Intensive:** Generating text using large language models can be computationally expensive and may require significant computational resources.
4. **Overreliance on Automation:** The application should be used as a tool to assist human creativity rather than a complete replacement for human-generated content.

In conclusion, the Text Generation Application provides a user-friendly interface for generating contextually relevant text based on prompts while adhering to word limits. It leverages the power of the GPT-2 model and serves as a creative aid for users.

Gradio Link – <https://cb9c436c5d9a9f2487.gradio.live/>

GitHub Link - <https://github.com/OlisaGeraldN/Text-Generation.git>