Refining Text Summarization: Customizing Falconsai for Precision and Contextual Relevance in NLP

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Abstract

The need for effective text summarization has grown significantly with the expansion of digital information. This study addresses the challenge of producing high-quality summaries by training a model using the Pranjal01/Text-summarizer-dataset to improve natural language understanding. Existing summarization methods often struggle with preserving key content while maintaining coherence and brevity. While state-of-the-art models like BERT and GPT-3 offer solutions, they suffer from limitations such as overgeneralization or excessive computational costs. Our research aims to overcome these shortcomings by fine-tuning FalconAI, a language model that demonstrates improved accuracy, reduced latency, and better contextual understanding. By enhancing text summarization capabilities, this work holds promise for applications in the Digital Technology industry, particularly in areas requiring concise and accurate information processing, such as content curation, automated reporting, and data analysis, thereby improving decision-making efficiency and reducing information overload.

Key Words: Text summarization, Natural language understanding, FalconAI, Pranjal01/Text-summarizer-dataset, Fine-tuning