**Popular science article generation with text simplification**

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The number of published scientific articles has increased dramatically recently. However, these articles often contain complex terminology and specialized language, making them difficult for non-expert readers to understand. This reduces knowledge sharing and collaboration between different fields. Our goal is to improve the accessibility of scientific content by simplifying it using Transformer models. We developed SimplifiSci, which consists of a two-part pipeline: First Transformer-based models, Grammarly-CoEdit and Google-FLAN-T5, simplify the text, then we identify scientific terms and provide definitions based on the article’s subject. We compared SimplifiSci against ChatGPT4.0 and DeepSeek-R1. The results show that SimplifiSci preserves the article’s structure while simplifying key terms and concepts. ChatGPT generated the most readable output, whereas DeepSeek produced text with the most diversity.

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