Generalizable Identifier System for Enhancing ASCII Art Recognition in LLMs

**Abstract**

ASCII art presents a unique challenge for Large Language Models (LLMs) due to its nature of encoding visual patterns using textual characters. This could lead to misinterpretations and vulnerabilities. This paper proposes a generalizable identifier system that operates at inference time to enhance ASCII art recognition in LLMs. The system detects ASCII art in text, converts it into an image, routes it through a Vision-Language Model (VLM) for captioning, and then injects the caption back into the LLM's prompt. By doing so, the approach improves recognition of ASCII-encoded content without requiring any retraining of the LLM. We evaluate the system on multiple ASCII art examples and compare its performance to baseline LLM responses. The results show that our lightweight pipeline significantly improves ASCII art comprehension in state-of-the-art LLMs compared to text-only processing. We conclude with a discussion of the implications for multimodal reasoning, content moderation, and future LLM-VLM integration.

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