

Graduate School of Science and Technology Master's Thesis Abstract

Laboratory name (Supervisor)	Natural Language Processing (WATANABE TARO (Professor))		
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Thesis title	Translating Movie Subtitles by Large Language Models using Movie Meta-information		
Abstract			
Large language models (LLMs) have advanced natural language processing by understanding, generating, and manipulating texts. Although recent studies have shown that prompt engineering can reduce computational effort and potentially improve translation quality, prompt designs specific to different domains remain challenging. Besides, movie subtitle translation is particularly challenging and understudied, as it involves handling colloquial language, preserving cultural nuances, and requires contextual information such as the movie's theme and storyline to ensure accurate meaning. This study aims to fill this gap by focusing on the translation of movie subtitles through the use of prompting strategies that incorporate the movie's meta-information, e.g., movie title, summary, and genre. We build a multilingual dataset which aligns the OpenSubtitles dataset with their corresponding Wikipedia articles and investigate different prompts and their effect on translation performance. Our experiments with GPT-3.5, GPT-4o, and LLaMA-3 models have shown that the presence of meta-information improves translation accuracy. These findings further emphasize the importance of designing appropriate prompts and highlight the potential of LLMs to enhance subtitle translation quality.			