

## Abstract

The rapid growth of online engagement and social media interactions has transformed communication dynamics, significantly increasing the volume and diversity of content generated across diverse social media platforms such as social networking sites, online group discussions, microblogging sites, image-centric platforms, and private messaging services. This surge in content has also heightened the risk of encountering harmful material, often presented in multimodal forms, including images, text, and videos. Among these, memes – particularly those combining text and images – have emerged as a powerful medium for conveying intricate and often subtle messages. While substantial research has focused on detecting hate speech on social media, addressing the computational challenges associated with multimodal and contextually nuanced content, such as *harmful memes*, remains a relatively underexplored area. This thesis explores the multifaceted aspects of analyzing memes within social media, emphasizing their *characterization, narrative role labelling, contextualization, and representation learning*. The study begins by characterizing harmful memes, identifying their satirical nature and the entities they target in a harmful manner, using novel multimodal models for detection and analysis. We then delve into the narrative roles within memes, focusing on identifying entities portrayed as victims, villains, or heroes or referred to in a harmful connotation in general, using a robust multimodal framework that models contextual saliency. Further, the thesis presents novel approaches for contextualizing memes, proposing tasks such as generating natural language explanations for visual narrative roles, dynamic context mining for augmenting meme understanding and question-answer-based formulation for memetic contextualization. Finally, the work advances representation learning by introducing self-supervised and affect-enriched pre-training methods that cater to the complexity of complex multimodal data, demonstrating the efficacy of these methods in improving meme analysis across various downstream tasks. Overall, the research addresses critical gaps in current methodologies and highlights the necessity of advanced multimodal approaches in understanding the nuanced interplay of text and imagery in memes.