AI-based Media Disruption and Transformation

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Abstract—The landscape of media and information dissemination is being dramatically reshaped by advancements in Artificial Intelligence (AI), particularly through the use of Generative AI and Large Language Models (LLMs). This editorial explores the transformative effects of AI on various sectors, including digital imagery, news event detection, audio content production, and the evaluation of LLMs for trustworthiness. By integrating findings from three distinct studies, this editorial aims to provide a comprehensive overview of how AI technologies not only enhance productivity and creativity but also pose challenges and raise important ethical questions.

Keywords-Generative AI; Large Language Models (LLMs); AI in Media Production; News Event Detection; Trust and Credibility in AI; Human-AI Interaction; AI-Generated Content; AI Impact on Jobs; AI in Creative Industries

I. INTRODUCTION

Artificial Intelligence has permeated the fabric of media and communication, catalyzing profound changes across content creation, processing, and dissemination. Central to this transformation are Generative AI and Large Language Models (LLMs), which have revolutionized the production of visual and audio content, and reshaped the mechanisms behind news aggregation and verification processes. These technologies have democratized media production, enhanced the personalization of content, and improved the efficiency of information dissemination. However, they also raise significant challenges related to job displacement, trust, and the potential for misuse. This editorial delves into the state-of-the-art AI applications in media, highlighting both the opportunities and dilemmas posed by these technologies.

II. SUBMISSIONS

The study "Human Perception and Classification of AI-Generated Images" by Stephan Böhm [1] assesses how media professionals in Germany perceive and classify AI-generated images. Only a few years after the introduction of image-generating AI like DALL-E or Stable Diffusion, repective tools are well known among media professionals in Germany. They are being used for image generation in the workspace. Slight differences in quality are perceived, but the image quality is not decisive for the classification as AI-generated or real artwork in a tested set of images. Moreover, the study reveals that professionals cannot reliably distinguish between AI-generated and real images. This indicates a significant advancement in image quality in AI outputs, reflecting both opportunities for widespread application and challenges in maintaining human oversight.

Barbara Brandstetter's [2] research titled "Human or AI?" focuses on the integration of AI in audio content production. Tools like Elevenlabs and MurfAI have enabled the creation of highly realistic human-like voices that can hardly be distinguished from real voices. However, the study highlights concerns about the impact of AI on the perceived credibility of content and willingness to pay, suggesting that transparency about AI involvement in content creation is crucial for maintaining trust.

In "An Empirical Taxonomy for Rating Trustability of LLMs", Matthias Harter [3] proposes a new framework for assessing the trustworthiness of LLMs, particularly in tasks related to fact-checking and misinformation. By comparing the responses of LLMs to expert-verified answers, the study underscores the potential of LLMs to perform at or above human expert levels in specific contexts, although it also points to the necessity of careful scrutiny and ongoing evaluation of these models to ensure their reliable use.

III. CONCLUSION

The integration of AI technologies in media production and dissemination presents a dual-edged sword: while they offer unprecedented opportunities for innovation and efficiency, they also introduce new ethical dilemmas and challenges. The studies reviewed indicate a significant shift towards the automation of creative and analytical processes, which can enhance productivity and expand creative possibilities. However, these advances also necessitate increased regulatory oversight and ethical considerations, particularly in the areas of transparency, job displacement, and the trustworthiness of AI-generated content. Moving forward, it will be crucial for stakeholders in the media and technology sectors to collaborate on developing standards and practices that harness the benefits of AI while mitigating its risks. This balance will be essential for ensuring that AI serves as a tool for enhancing human creativity and integrity in the media landscape.

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REFERENCES

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