Call for Papers to the Special Issue:

Generative AI and its Transformative Value for Digital Platforms

Submission deadlines
Optional extended abstract: September 15, 2023
Full paper: January 15, 2024

Guest Editors

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Motivation

Generative AI, which refers to artificial intelligence (AI) algorithms that generate original outputs based on prompt inputs, has the potential to fundamentally transform the way people create and consume content online. Unlike previous generations of AI systems, which were primarily designed to recognize patterns and make predictions, Generative AI synthesizes the data it has been trained on and creates content in the form of images, text, audio, video, and more that is similar to content created by human experts – but in much less time, at a fraction of the cost, and with amazing creativity.

In this special issue, we focus on the opportunities and challenges that Generative AI poses for digital platforms. Over the past two decades, social media platforms such as Twitter and YouTube, mobile app platforms such as Apple's App Store, e-commerce platforms such as Amazon, freelance platforms such as Upwork, and sharing economy platforms such as Airbnb and Uber have reshaped and disrupted entire industries. What these platform companies have in common is that they create value by facilitating interactions and the exchange of goods and services between two or more groups that would have been difficult or impossible to connect in the absence of the platform [8, 13]. Information systems (IS) scholars have made important contributions to the literature on digital platforms [e.g., 6, 10, 11, 14, 18-21], much of which has been focused on the complex relationship between the triumvirate of users, complementors (i.e., those who contribute content to the platforms such as app developers or video creators), and the platform provider, which together form the platform ecosystem.

In the context of digital platforms, all stakeholders, and their interactions with one another, can be transformed by Generative AI. For example, Generative AI can enable unprecedented forms of personalization (i.e., hyper-personalization), allowing complementors to instantly tailor their offerings to meet the preferences of each individual user. However, complementors in particular may also feel threatened by the technology's disruptive potential. For instance, research has shown that the introduction of a Generative AI system on a crowdsourcing platform can motivate complementors to either leave the platform or shift their efforts to more complex contests to avoid competing directly with the new system [9]. While all platform stakeholders can draw on Generative AI to save countless hours of human labor and enhance the user experience in various platform settings, we are only beginning to understand the transformative value of the technology for digital platforms.

Especially since the introduction of ChatGPT3 by OpenAI in 2022, Generative AI is experiencing rapid growth, with Gartner [7] predicting that 30% of outbound messages will be synthetically generated by 2025. As a major paradigm shift, Generative AI will continue to revolutionize the way we use, govern, and understand digital platforms, creating a wealth of opportunities for individuals, teams, organizations, and society. However, there are also concerns that Generative AI will lead to job displacement, as the technology becomes capable of performing tasks that were previously done by humans [22].

IS researchers have contributed important insights on fundamental questions regarding the implications of AI for business as well as how the technology could and should be managed [2]. However, with the emergence of Generative AI, new research avenues are opening up, providing an opportunity for IS scholars to conduct leading research on the transformative and value-creating capacity of this fascinating technology, especially with regard to digital platforms [e.g., 9]. As a disruptive technology, Generative AI can enable truly innovative services and business models that engage all platform stakeholders in unprecedented ways. It could disrupt entire platform industries, sending them into a downward spiral while providing groundbreaking opportunities for others. Despite this promise as a game changer, the interplay between the Generative AI's inherent potential and its transformative value for digital platforms is poorly understood and requires further research. This is an area where IS scholars are well-equipped to contribute to the discussion through cutting-edge research.

Focus

Rather than addressing the operational and tactical merits of Generative AI, this special issue provides a dedicated forum for IS and other scholars to engage in an important dialogue on its strategic and managerial implications. In particular, we are interested in the transformative value of Generative AI for digital platforms and the impact of Generative AI on the various stakeholders in a digital platform ecosystem, including complementors, users, and platform providers.

I. The transformative value of Generative AI for complementors

Generative AI is changing the way complementors deliver products and services. Beyond being a more advanced personalization tool, the use of Generative AI in digital platforms raises questions about how it affects the role, strategies, and capabilities of complementors over time as well as the competition among them [e.g., 16, 24]. For instance, the technology may lower barriers to entry by shortening development times and enabling even novice complementors without technical backgrounds to engage in tasks such as app development, potentially increasing competition among complementors. And more broadly, Generative AI can contribute to transforming entire business models [e.g., 4, 23]. How will complementors differentiate themselves when all textual, visual, and audio content is created by Generative AI? What is the role of humans as value creators in this world? Which complementors will be most affected?

II. The transformative value of Generative AI for users

Generative AI can provide platform users with powerful creative tools that promise productivity gains in the creation of content, such as text, images, and music [12]. These are just three examples of highly extensible formats that Generative AI can drastically influence, with serious implications for how users organize and improve their platform activities [e.g., 19]. This will enable users to create high-quality content with minimal effort, making it easier for them to express themselves and share their ideas with others. In turn, this could further blur the lines between consumers and creators of content and services on digital platforms, as the skill barrier to create is significantly reduced. With easier entry to become a complementor, it can also be of interest to see how users react to products and services created using Generative AI. Will the perception of quality be altered by the disclosure of the usage of AI [15]? What consequences with regard to competition and differentiation can be observed in platform markets?

III. The transformative value of Generative AI for platform providers

As Generative AI changes how users and complementors act and interact, so does the platform where the interaction happens. While Generative AI empowers users, the resulting dynamics and complexities in the complements and interactions need to be evaluated and considered, including business and ethical limitations (e.g., privacy, copyright, unethical applications, fraud detection) [e.g., 1, 3]. In the same vein, Generative AI may be used as a means to improve governance and orchestration of digital platforms [e.g., 5]. Despite these realities, we know little about how platform providers can manage and control the employment and use of Generative AI to create flourishing ecosystems, increase alignment between all stakeholders, and build (more or less open) value networks to integrate with upstream and downstream partners along future platform chains.

IV. The societal and economic effects of Generative AI

The transformative value of Generative AI presents major opportunities, while also raising concerns about its broader societal and economic effects. For instance, the technology can stimulate innovation and aid the development of new products and services. However, it could also contribute to job displacement, as machines take over tasks previously done by humans. Additionally, Generative AI could exacerbate existing inequalities in society by favoring those who have access to the technology, leading to a new digital divide. There are also concerns about the ethical implications of using Generative AI, including issues related to data privacy, bias (e.g., biased training data), and accountability. It is thus essential to study the societal and economic effects of Generative AI to ensure that its benefits are maximized while minimizing its potential harms. We therefore also explicitly invite research that considers humanistic outcome variables (e.g., emotional and mental well-being of individuals and society) rather than focusing strictly on efficiency and productivity perspectives [17].

Possible Topics

The focus of this special issue is to stimulate innovative investigation of the transformative value of Generative AI for digital platforms at or between all levels of analysis. Digital platforms should be the empirical setting.

All lenses of inquiry into the disruptive nature and impact of Generative AI for digital platforms are encouraged, including strategic, organizational, behavioral, economic, and technical perspectives. We welcome theoretical, analytical, and empirical (including trace data from platforms, surveys, experiments, simulations, qualitative data, case studies, and secondary data from organizational, market, and regulatory sources) contributions to the special issue. Consistent with the policies of JMIS, the papers should aim to make a significant novel contribution to the IS field.

Possible research areas include, but are not limited to:

- Accessibility: The role of Generative AI in enhancing accessibility and inclusion on digital platforms. Does Generative AI reduce barriers to express oneself and enable more active user participation?
- Empowerment: Generative AI and its value for the democratization and empowerment of marginalized groups (e.g., skills, costs, language barriers, technological compatibility).
- Complementors: How do complementors react to the introduction of Generative AI on platforms? Does it increase competition among complementors? How do communities react to content that is generated by AI?
- Automated content creation: Use of Generative AI to automate content creation on digital platforms, thereby reducing costs while trying to maintain quality. For example, automatic creation of product descriptions, reviews, and other content indistinguishable from human-created content.
- Human engagement in Generative AI: Training and updating Generative AI to achieve better results for digital platforms. Technology affordances of AI and their practical socio-technical design principles.
- Business model and value proposition: Generative AI can possibly alter a platform's business model that used to rely on content that is produced by complementors. How is the business model and value proposition affected when content can largely be generated "artificially"?
- Generative AI as a platform: Many new Generative AI systems offer boundary resources such as APIs. What new business models emerge from a platform-based AI?
- Network effects: How can Generative AI help to kickstart and maintain network effects? The role of Generative AI in overcoming the "chicken-and-egg" problem. For example, Generative AI as social bots replacing users.
- Competition between digital platforms: Does Generative AI level the playing field between rival platforms or does it intensify "winner-take-all" dynamics?
- Platform governance and openness: How do boundary resources change to compensate for automatic content creation? How is platform governance adjusted to accommodate AI-generated content?

- Society and goverments: What are the consequences of Generative AI beyond digital platforms? How is society affected? What can and should governments do?
- User experience: The impact of Generative AI on user engagement, satisfaction, and experience on digital platforms. Also, reaction to, approval of, and willingness to pay for AI-generated content.
- Humanistic outcomes: The role of Generative AI for the emotional and mental well-being of users and society beyond efficiency and productivity outcomes (e.g., income inequality, government corruption, and overreach).
- Personalized content: The potential of Generative AI to create personalized content and enhance the relevance of recommendations and search results. For example, personal product recommendations for each user based on their past purchases and browsing history. Do Generative AI features such as hyper-personalization lead to stronger lock-ins due to higher switching costs?
- Ethical considerations: The ethical implications of using Generative AI on digital platforms, including the risks associated with the creation of fake news, deepfakes, and misinformation. For example, how is the spread and "quality" of misinformation affected using Generative AI.

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Timeline

Authors are encouraged to submit a two-page extended abstract prior to submission of the full paper to get feedback from the Guest Editors on the fit with the special issue. The optional abstract should clearly present the research question, theory, method, and expected contribution and can be submitted any time before **September 15, 2023** via JMIS.GenerativeAI@gmail.com for initial guidance but without formal peer review.

Papers will be processed as they are received. The editorial timeline will proceed as follows:

Full paper submission opens: **September 15, 2023**
Full paper submission deadline: **January 15, 2024**
First round of reviews completed: **April 15, 2024**
Paper revisions due: **August 15, 2024**
Second round of reviews completed: **October 15, 2024**
Second paper revisions due: **December 15, 2024**
Final decision: **Early 2025**

Submission

Full paper submissions are **only** accepted through OpenRewiew.net via the following link:
https://openreview.net/group?id=JMIS-web.org/2023/Journal_SI_Generative_AI

All submissions must be original and may not be under review elsewhere. For the format of the papers, please follow the guidelines on the JMIS website.

Please send extended abstracts or questions to JMIS.GenerativeAI@gmail.com.

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