



**electronics**



*Special Issue Reprint*

## **Generative AI and Its Transformative Potential**

[www.mdpi.com/books/reprint/10996](http://www.mdpi.com/books/reprint/10996)

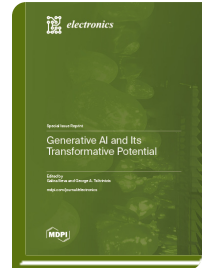
Edited by

Galina Ilieva

George A. Tsihrintzis

ISBN 978-3-7258-4185-1 (Hardback)

ISBN 978-3-7258-4186-8 (PDF)



This Special Issue delves into the transformative potential of generative artificial intelligence (AI) across scientific and business domains. As AI progresses from automating repetitive tasks to amplifying creativity and innovation, it opens new pathways for research, education, industry, and human-centered systems. The contributions collected here illustrate how generative models are reshaping content creation, product design, and human-machine interaction. Leading experts offer insights into generative AI architectures, domain-specific applications, and practical implementations across multiple fields. The papers are organized into three thematic clusters: foundational frameworks for generative AI systems; educational and human-centered applications; and creative and business use cases. Together, these studies highlight both the opportunities and the challenges posed by this technology, particularly in relation to ethics, authenticity, and integration with existing infrastructures. Through this curated selection of research, we aim to foster a deeper understanding of how generative AI can be harnessed to enhance education, enrich society, and drive sustainable technological progress. As the field continues its rapid advance, we look forward to future explorations that build on the foundations laid in this Special Issue and promote the responsible, innovative deployment of AI systems.



Order Your Print Copy

You can order print copies at

[www.mdpi.com/books/reprint/10996](http://www.mdpi.com/books/reprint/10996)

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



## Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



## Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



## High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



## High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



## Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.