

WEB 3.0 UNLEASHED

Transforming
Experiences with AR,
AI, and Immersive
Technologies

Edited by

BALRAJ VERMA, AMIT MITTAL,
MURALI RAMAN, and BIRUD SINDHAV

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INVESTOR IN PEOPLE

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Foreword

The dawn of Web 3.0 marks a new era for businesses worldwide, setting the stage for unprecedented digital transformation. At HP, we have long recognized the potential of emerging technologies to empower individuals and organizations alike. As we embark on this journey, it's evident that the convergence of blockchain, artificial intelligence (AI), augmented reality (AR) and virtual reality (VR), and the metaverse will redefine industries with an impact that goes beyond mere digital enhancement – it fundamentally shifts how we interact, transact, and innovate.

Web 3.0 Unleashed: Transforming Experiences with AR, AI, and Immersive Technologies captures the transformative possibilities of this next-generation digital landscape. The contributors in this book bring together deep expertise from across the globe, offering insights into how Web 3.0 innovations will reshape retail, healthcare, finance, and supply chains. For HP, supporting this type of pioneering work aligns with our commitment to fostering advancements that make technology accessible, secure, and environmentally responsible.

In particular, the thematic structure of this book provides a comprehensive view into both the advantages and challenges of Web 3.0. Each chapter confronts not only the opportunities for growth but also the ethical and operational complexities these technologies present. From blockchain's role in creating transparent, reliable systems to the application of AR and VR in enhancing customer experience, these insights are critical as organizations strive to remain competitive and adaptive in an increasingly digital-first world.

What resonates most with HP's mission is the emphasis on ethical leadership and sustainable practices in the digital age. As we move forward, the responsible application of technology – ensuring data privacy, promoting transparency, and advancing eco-friendly solutions – will be paramount. This book serves as a valuable guide, particularly for those in academia, industry, and policy who are steering through these complexities.

To the readers of *Web 3.0 Unleashed*, I hope this book inspires you as it has inspired me. We stand on the precipice of extraordinary change, where technology and humanity are inextricably linked. The insights in these pages remind us of the immense potential we have not only to transform business but also to create a positive impact on society as a whole. I am honoured to introduce this groundbreaking work and invite you to explore the future of business through the lens of Web 3.0.

Mr Alex Tan, Managing Director
HP PPS Sales Sdn Bhd, Malaysia

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Preface

The advent of Web 3.0 is reshaping the digital landscape, ushering in an era where artificial intelligence (AI), augmented reality (AR), blockchain, and decentralized finance (DeFi) converge to create immersive and intelligent experiences. Businesses, consumers, and policymakers alike are witnessing a paradigm shift where digital interactions transcend traditional boundaries, unlocking unprecedented opportunities for engagement, efficiency, and innovation.

This edited volume, *Web 3.0 Unleashed: Transforming Experiences with AR, AI, and Immersive Technologies*, presents a comprehensive exploration of these emerging technologies and their profound impact on business and consumer performance. By curating cutting-edge research from distinguished scholars worldwide, this book aims to provide a multifaceted understanding of how AI, AR, and other immersive technologies are shaping industries such as healthcare, finance, retail, and beyond.

The chapters in this book address critical questions related to technology adoption, consumer behaviour, business efficiency, and digital transformation. Topics range from the acceptance of AI-driven tools like ChatGPT among university students to the role of AI in healthcare across India and ASEAN countries. Additionally, bibliometric analyses of AR applications and FinTech research provide a macro-perspective on technological advancements and academic contributions. Further, discussions on AI-powered robotic services, decentralized AI marketplaces, and metaverse applications in retail underscore the breadth of innovation in the Web 3.0 era.

This book is structured to benefit academics, industry professionals, policymakers, and technology enthusiasts who seek to understand and leverage these disruptive technologies. Each chapter not only presents empirical research and theoretical insights but also provides practical implications that can guide businesses and entrepreneurs in harnessing AI, AR, and immersive technologies for sustainable growth.

We extend our sincere gratitude to the contributing authors for their invaluable research and to the academic institutions that have supported this initiative. Special thanks go to the editorial team for their dedication in ensuring the rigour and relevance of this volume. We hope this book serves as a valuable resource for those navigating the evolving digital economy and contributes meaningfully to the ongoing discourse on Web 3.0 technologies.

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Chapter 1

Factors Affecting the Acceptance of ChatGPT: A Study of Malaysian University Students

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Abstract

Education stakeholders face both opportunities and challenges because of the emergence and advancement of technologies like artificial intelligence (AI). The use of AI in higher education has brought about new advantages, disadvantages, and pressure. One example of this is OpenAI's chat generative pre-trained transformer (ChatGPT). Reports on how students view and plan to use ChatGPT are very rare. Considering these, the study investigated how students intended to use ChatGPT during their time in higher education. A survey of 400 questionnaires was distributed to university students in the Klang Valley area of Malaysia. A two-stage structural equation modelling (SEM) was used to determine the hypotheses of the study. The results revealed that perceived trust (PT), performance expectancy (PE), effort expectancy (EE), and social influence (SI) have a significant impact on the intention to use ChatGPT. In addition, the intention to use ChatGPT and facilitating conditions (FCs) have a significant impact on the acceptance of ChatGPT (ACC). The findings further revealed that intention fully mediates between PT and the ACC, while the findings showed no mediation effect of intention between FC and the ACC. However, this result will be beneficial for academicians, scholars, marketers, and all the stakeholders involved in the industry.

Keywords: Artificial intelligence; ChatGPT; acceptance; perceived trust; UTAUT; Malaysia

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