



# **Emerging Technologies and their Influence on User Satisfaction in Mobile Banking Apps**

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A THESIS  
SUBMITTED TO  
SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
MASTER OF SCIENCE IN INFORMATION MANAGEMENT

December 2024

I certify that I have read this thesis and that in my opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Science.

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# DECLARATION

This is to certify that the work is entirely my own and not of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Sri Lanka Institute of Information Technology or to any other institution for assessment for any other purpose.

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# ABSTRACT

This thesis investigates the impact of emerging technologies—Augmented Reality (AR), Biometric Authentication, Artificial Intelligence (AI), and the Internet of Things (IoT)—on user satisfaction within mobile banking applications. Using the Technology Acceptance Model (TAM) as a conceptual framework, the study examines how these technologies influence key TAM variables, specifically Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), to ultimately shape user satisfaction.

The research collected data through a structured questionnaire, capturing users' perceptions of each technology's contribution to their mobile banking experience. Findings indicate that these technologies significantly enhance PU and PEOU, indirectly fostering greater user satisfaction. Specifically, AR and AI were found to improve both PU and PEOU by offering more intuitive and responsive interactions. Biometric Authentication simplified access and increased trust, while IoT expanded the accessibility and functionality of mobile banking.

This study contributes to mobile banking literature by integrating multiple technologies within a single TAM-based framework, demonstrating that modern technological features can act as pathways to enhance user experience. Practical implications suggest that mobile banking providers can benefit from incorporating these technologies to create more user-friendly, secure, and personalized apps. In conclusion, as mobile banking continues to evolve, leveraging these innovations is essential to meet the demands of today's digital-savvy consumers, offering insights for future developments in mobile banking technology.

# ACKNOWLEDGEMENT

I would like to express my heartfelt gratitude to all those who have supported and guided me throughout this research journey. First and foremost, I extend my deepest appreciation to my supervisor, Ms Shashika Lokuliyana for her invaluable guidance, patience, and expertise, which has been instrumental in shaping this thesis. Her encouragement and constructive feedback have inspired me to challenge myself and refine my work to the highest standard.

I would also like to thank the faculty at SLIIT, especially the Department of Graduate Studies, for providing a conducive learning environment and access to resources that were essential for completing this study. A special thank you to my classmates and peers, whose camaraderie and shared insights made this journey a more rewarding experience.

I am sincerely grateful to the participants of my study, without whose input this research would not have been possible. Their willingness to share their thoughts and experiences has contributed significantly to the insights gained through this work.

Thank you to everyone who has contributed, directly or indirectly, to the successful completion of this thesis. This work is a testament to your support and dedication.

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