

Chapter 18

Emerging Technology Adoption and Applications for Modern Society Towards Providing Smart Banking Solutions

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ABSTRACT

The rapid advancement of emerging technologies has brought significant transformations to various sectors, including banking and finance. This chapter explores the adoption and application of emerging technologies in modern society, particularly focusing on their role in providing smart banking solutions. Technologies such as artificial intelligence (AI), blockchain, internet of things (IoT), and biometrics are revolutionizing traditional banking practices, enabling enhanced security, efficiency, and personalized services for customers. Through a comprehensive analysis of current trends and case studies, this chapter highlights the impact of these technologies on improving customer experiences, streamlining operations, mitigating fraud risks, and fostering financial inclusion. Additionally, it discusses the challenges and opportunities associated with the integration of these technologies into banking systems, including regulatory concerns, data privacy issues, and the need for skill development among banking professionals.

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1. INTRODUCTION TO EMERGING TECHNOLOGIES AND SMART BANKING

In today's fast-paced digital era, the banking industry is undergoing a profound transformation driven by the rapid advancement of emerging technologies (Li, Chen, & Wu, 2018; Huang & Rust, 2018). From artificial intelligence (AI) to blockchain and beyond, these technologies are reshaping traditional banking models and ushering in an era of smart banking solutions. The convergence of emerging technologies with banking has led to the creation of innovative services and enhanced customer experiences. Smart banking solutions use these technologies to provide customers with convenient, secure, and personalized financial services tailored to their individual needs and preferences. This introduction sets the stage for exploring the adoption and applications of emerging technologies in modern society, particularly in the realm of smart banking. By delving into the potential of these technologies and their impact on the banking landscape, we can gain insights into how they are revolutionizing the way financial services are delivered and consumed. Throughout this exploration, we will examine key technologies driving this transformation, such as AI, blockchain, Internet of Things (IoT), and biometrics (Gomber et al., 2018). We will also discuss how these technologies are being used by banks to enhance operational efficiency, mitigate risks, and foster greater financial inclusion. Moreover, we will address the challenges and opportunities associated with the integration of emerging technologies into banking systems, including regulatory issues, data privacy issues, and the evolving role of banking professionals in a digital-first environment.

Hence, by understanding the intersection of emerging technologies and smart banking, we can envision a future where banking services are not only technologically advanced but also more accessible, inclusive, and responsive to the needs of customers in an increasingly interconnected world. This exploration aims to shed light on the transformative potential of emerging technologies in shaping the future of banking and driving positive outcomes for individuals, businesses, and society as a whole.

1.1 Importance of Smart Banking Solutions in This Smart Era

In today's smart era characterized by rapid technological advancements and increasing connectivity, smart banking solutions play an important role in meeting the evolving needs and expectations of customers while driving efficiency and innovation within the banking industry. Several key reasons underscore the importance of smart banking solutions in this context:

Enhanced Customer Experience: Smart banking solutions use emerging technologies such as AI, machine learning, and data analytics to provide customers with personalized and seamless experiences. Through intuitive digital interfaces, real-time assistance, and proactive insights, banks can anticipate and fulfill customer needs more effectively, thereby enhancing overall satisfaction and loyalty.

Convenience and Accessibility: Smart banking solutions enable customers to access a wide range of financial services anytime, anywhere, through digital channels such as mobile apps and online platforms. This convenience empowers customers to manage their finances on their terms, leading to greater engagement and retention.

Improved Efficiency and Productivity: Automation and digitization of banking processes streamline operations, reduce manual errors, and accelerate decision-making, leading to improved efficiency and productivity for both customers and banking staff. Tasks such as account opening, loan processing, and customer support can be automated, freeing up resources for more value-added activities.

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