

Chapter 2

Explainable Artificial Intelligence in Consumer–Centric Business Practices and Approaches

Sonal Trivedi

 <https://orcid.org/0000-0001-8711-2977>

VIT Business School, VIT Bhopal University, Bhopal-Indore Highway,
Kothrikalan, Sehore, India

ABSTRACT

The review begins by discussing the fundamental concepts of XAI, highlighting its significance in enhancing consumer trust and engagement in AI-driven services and products. The authors explore various dimensions of XAI, such as interpretability, transparency, and accountability, and their implications in consumer-centric contexts. This study identifies a range of methods and techniques adopted by businesses to implement XAI, including rule-based systems, model-agnostic approaches, and interpretable machine learning models. Content analysis is employed as the primary research method in this review. The findings of this SLR provide a holistic overview of the current state of XAI in consumer-centric business practices and approaches, helping businesses and researchers gain a better understanding of the field's evolution and the challenges that lie ahead. It also underscores the importance of ethical considerations and regulatory frameworks in fostering responsible AI adoption within consumer-focused domains.

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1. INTRODUCTION

In today's rapidly evolving digital landscape, the integration of artificial intelligence (AI) into consumer-centric business practices has become ubiquitous (Gkikas & Theodoridis, 2022). However, the opaqueness of AI systems has raised concerns related to trust, accountability, and the ethical use of these technologies. Explainable Artificial Intelligence (XAI) has emerged as a critical approach to addressing these concerns by enhancing the transparency and interpretability of AI systems, especially in contexts that directly impact consumers (Mangio, Pedeliento & Andreini, 2022). This research paper embarks on a comprehensive exploration of the role of XAI in consumer-centric business practices and approaches, shedding light on its significance, methodologies, and the myriad ways in which businesses are leveraging XAI to create more trustworthy, ethical, and engaging interactions between AI systems and consumers. By employing content analysis as the primary research methodology, we aim to synthesize and analyze the existing literature, offering valuable insights into the current state of XAI within consumer-oriented domains and its implications for businesses and consumers alike.

The chapter flow of the current study is as follows:

- 1.0 Introduction
- 1.1 Problem Statement
- 1.2 Research Methodology
 - 1.2.1 Systematic Literature Review
 - 1.2.2 Content Analysis
- 2.0 Literature Review
 - 2.1 Fundamental Concepts of XAI
 - 2.1.1 Introduction:
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 - 2.2.1 Introduction
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