Chapter 12
Customer-Centric E-Grocery Services in India:
Leveraging AI for Personalised Nutrition Solutions

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ABSTRACT

The convergence of artificial intelligence (AI) and health data is revolutionising how consumers approach nutrition, particularly in the e-grocery sector. Groceries are sold in India through websites and apps designed to engender a unique customer experience. This chapter explores the transformative potential of AI-driven personalised nutrition solutions in e-grocery shopping platforms. Based on recent research and data gleaned from the grocery industry, the chapter examines how machine learning and behavioural analytics can be integrated with dietary preferences and real-time consumption data to deliver hyper-personalised food recommendations to Indians. Findings suggest that AI not only enhances consumer health outcomes but also drives business value through increased engagement and loyalty. However, scalability depends on overcoming barriers like data standardisation, algorithmic transparency, and equitable access.

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INTRODUCTION

Grocery shopping is no longer the same. The digital world has ensured that customers have a plethora of options to choose from when they indulge in a routine activity like grocery shopping. The on-demand services rendered by e-grocery apps in India in response to changing consumer preferences are altering the grocery ecosystem in a major way. Suddenly, businesses are realising the transformative power of selling groceries online. The omni-channel delivery of grocery products by integrating offline and online channels to deliver a seamless customer experience is rewriting the rules of the game. Smart grocery shopping, powered by AI and health data integration, is further expected to revolutionise nutrition by transforming dietary logs and real-time analytics into hyper-personalised recommendations for customers seeking healthier food choices.

The Indian market is witnessing a new trend with 60% of consumers prioritising personalised nutrition (Accenture 2023). India's health-food sector is projected to hit $10B (RedSeer 2024). This is an area with immense potential, yet most e-grocers overlook this potential or are oblivious to the prospects. E-grocers in India are attempting to diversify with non-grocery-related products like footwear or electronic goods. Pioneers like HealthifyMe and Nutrino demonstrate how vernacular AI, blockchain-backed food traceability, and IoT smart carts can bridge gaps—from Kerala's jackfruit-based diets to diabetic-friendly bundles for 101 million pre-diabetics. In India, millet-based alternatives can be suggested when glucose monitors detect spikes, critical for Punjab, where 27% of adults have diabetes (Sohil et al, 2025). While Western models target keto/gluten-free trends, India demands culturally intelligent solutions addressing regional disparities: combating Rajasthan's 58% anaemia rates or optimising plant-based proteins for vegetarian populations.

Goa's innovative AI-powered rice substitution initiative analyses local health data and dietary patterns to recommend personalised, lower-glycemic alternatives to traditional white rice, such as nutrient-rich red rice or millet blends, helping combat the state's growing diabetes prevalence while preserving cultural food preferences. This hyperlocal approach demonstrates how AI can adapt global nutrition science to regional culinary traditions, creating scalable solutions for India's diverse dietary landscape.

As HealthifyMe CEO Tushar Vashisht asserts, "The winner won't just sell food but solve nutritional crises through ethical AI," urging retailers to leverage India's unique dietary diversity before global players dominate. This chapter decodes the tech stack (machine learning, AR labels), ethical frameworks, and implementation roadmaps to position e-grocers as preventive health partners, not just delivery platforms.