

Artificial Intelligence in the Food Industry: Enhancing Quality and Safety

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Description In this changing world of food processing and handling, efficiency and safety are paramount. Artificial Intelligence in the Food Industry: Enhancing Quality and Safety offers a groundbreaking exploration of how artificial intelligence (AI) technologies can address these critical needs. This book explores the transformative potential of AI, machine learning (ML), and deep learning (DL) algorithms in revolutionizing the food industry. By overcoming the limitations of human involvement, AI ensures a more reliable demand-supply chain and enhances food safety. As the global population grows and food consumption reaches unprecedented levels, the demand for innovative solutions is urgent. This book demonstrates how intelligent systems can accurately assess food quality, implement control mechanisms, categorize foods, and conduct predictive analyses. Such advancements are reshaping sectors, including dairy, bakery, beverages, and fruits and vegetables, making this an indispensable guide for food production and safety professionals. It explores several cutting-edge topics such as the role of ML and computer vision in the agri-food industry, the potential of 3D printing, and the integration of AI with sensory technologies like electronic noses, electronic tongues, and near-infrared spectroscopy. These insights highlight how AI can significantly enhance food quality and productivity, benefiting both consumers and industry players. Artificial Intelligence in the Food Industry not only showcases current advancements but also emphasizes the need for ongoing research and innovation. By inviting readers to explore AI's transformative potential in food ...

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