A Review on Recipe Generation from Food Image Using Machine Learning

Prof.Pratiksha Prakash Pansare[1], Kunal Navnath Khatik[2],
Niraj Nandkumar Shigvan[2], Rohan Vaijanath Lande[2]
Assistant Professor, Department of Computer Engineering[1]
Students, Department of Computer Engineering[2,3,4]
Samarth College of Engineering and Management, Belhe ,Junnar, Pune, Maharashtra, India

Abstract*: The rapid advancement of machine learning and computer vision technologies has opened new possibilities in the food and culinary domain. This project, "Recipe Generation from Food Image Using Machine Learning" aims to develop a system that can automatically generate detailed recipes from images of food. By leveraging convolutional neural networks (CNNs) for image recognition and deep learning models for natural language processing, the system will identify the type of dish, ingredients, and cooking methods based solely on an input image.*

The project addresses challenges in image classification, feature extraction, and the mapping of visual content to text-based recipes. The proposed solution involves training the model on large datasets of food images paired with their corresponding recipes to create a highly accurate and scalable system. Practical applications include improving user experiences in mobile apps for cooking enthusiasts, assisting individuals with dietary restrictions by suggesting alternatives, and contributing to the broader field of automated cooking assistant

Keywords: Recipe Generation, Food Image Recognition, Machine Learning, Convolutional Neural Network (CNN), Natural Language Processing (NLP), Automated Cooking Assistant