**Abstract**

With today's busy lifestyle, it is often difficult to keep up with a balanced diet and nutritional intake tracking. The project introduces an AI-based food tracking web application that makes the process easier by enabling the user to shoot or upload photos of their food and receive instantly a comprehensive nutritional analysis. With a machine learning model that has been trained to identify different foods, the system determines what the user is consuming and approximates portion sizes where possible. Every item that is detected is cross-referenced with a nutritional database to offer precise information on calories, protein, carbohydrates, and fats. The app stitches a new-age frontend user interface onto a high-capacity backend, which does the image processing, runs inferences, accesses nutrition facts, and stores the users' logs. The detected outcomes are shown, validated, or editable for the users to check on daily or historical intake of foods. It uses computer vision, nutritional knowledge, and zero-logging interface experience to deliver the improved nourishment automatically to aid eating behavior modification.

**INTRODUCTION**

This project is a web application that uses AI to help you track your food intake. Users can easily upload or snap pictures of their meals and get an instant breakdown of the nutrition, including calories, protein, carbs, and fats. Thanks to machine learning for food detection and a well-organized nutrition database, the system can accurately recognize food items, estimate portion sizes, and log the nutritional information into a user’s daily tracker. With a clean and user-friendly design, it simplifies the food logging process, making healthy eating more manageable and accessible. The project harnesses the power of artificial intelligence and computer vision to enhance nutrition tracking, making it more efficient, precise, and easy to use. By analyzing meal images, the system cuts down on the manual work usually involved in food logging, providing users with a quick and intuitive way to keep tabs on their dietary habits. With real-time detection and nutritional insights, the application empowers users to make better food choices and develop healthier eating patterns over time.

**PROPOSED PROJECT**

The project we're proposing is an all-in-one, AI-driven food tracking system that makes it easy for users to keep tabs on their nutrition just by uploading pictures of their meals. At its heart, this system uses a machine learning model to identify and categorize food items from those images. It then connects these items to a nutrition database to calculate important metrics like calories, protein, carbs, and fats. The backend will feature a RESTful API that takes care of image processing, data analysis, and logging, while the frontend will offer a user-friendly interface for uploading photos, checking results, and monitoring daily intake. By blending computer vision, nutritional science, and a smooth user experience, this project aims to provide a smart and effective way to manage personal health. Plus, it paves the way for exciting future upgrades, such as estimating portion sizes, offering personalized health advice, and syncing with wearable health devices or fitness applications**.**