

# TasteTrail: An Interactive Recipe Discovery & Meal Planning App

Submitted by: Sachin Patel

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## Abstract

TasteTrail is a personalized recipe and meal planning application designed to help users discover dishes based on dietary preferences, plan weekly meals with a drag-and-drop calendar interface, and automatically generate categorized shopping lists. Built using the MERN stack (React.js, Node.js, Express.js, MongoDB), the system focuses on a responsive, mobile-friendly UI and features like recipe saving, user reviews, photo sharing, and an admin panel for recipe management.

## Introduction

**Purpose:** To provide an intuitive platform for recipe discovery, personalized meal planning, and grocery automation.

**Motivation:** Many users struggle to plan meals and manage ingredient lists; TasteTrail simplifies this process while offering dietary personalization. **Target Users:** Home cooks, busy professionals, students, fitness enthusiasts.

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## Objectives

1. Enable detailed user profiles with dietary preferences and allergies.
2. Provide smart recipe discovery with advanced filtering.
3. Implement an interactive drag-and-drop weekly meal planner.
4. Auto-generate organized shopping lists from planned meals.
5. Allow users to save collections, review recipes, and share photos.
6. Provide an admin panel for recipe curation and management.

## **System Analysis**

**Proposed System:** A unified web application that centralizes recipes, personalizes recommendations, and automates shopping list creation.

**Feasibility:-**

**Technical:** Uses MERN stack; easily deployable on Vercel/Heroku.

**Operational:** Simple UI reduces learning curve.

**Economic:** Low deployment and maintenance costs; suitable for MVP.

## **Conclusion**

TasteTrail provides a functional and user-centric solution for recipe discovery and meal planning. The project demonstrates full-stack development skills and prepares the app for further enhancements like AI recommendations and integrations.

## **References**

- React.js Documentation
- Node.js & Express Documentation
- MongoDB Documentation
- Vercel Deployment Guides
- Various tutorials and articles used during development