



COOKING MANIA

AI Project Proposal

Course Instructor:

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Section:

BCS - 7A

Objective:

This project's primary objective is to develop an AI-powered application that assists users in creating simple recipes utilizing any random product they may have in their cupboard. The program uses artificial intelligence (AI) and natural language processing to provide useful recipe suggestions based on available resources, with the goal of streamlining meal preparation and decreasing food waste.

Problem Statement:

Many people struggle with meal planning, particularly when they have random or limited items at home. Frustration, pointless trips to the grocery shop, or food waste might result from this. The abundance of recipes, many of which are overly intricate or call for extra ingredients, exacerbates the issue. Customers require a system that can use what they already own to make quick, customized recipe recommendations.

Proposed Solution:

This project proposes to develop an AI-powered recipe suggestion tool that takes in user-provided ingredients and matches them to a database of recipes. Using machine learning and natural language processing, the AI will recommend recipes that can be made with all or some of the input ingredients, prioritizing simplicity and ease of preparation. This solution will help users make the best use of their available ingredients without needing to search through endless recipes.

Scope:

The project will cover:

- Building a web/desktop app for users to input their ingredients.
- Implementing an AI model that recommends recipes from a pre-existing recipe dataset.
- Providing recipe suggestions that are simple, easy, and customizable based on the user's available ingredients.

Limitations:

- The tool will only suggest recipes from existing datasets, and may not create entirely new recipes.
- It will focus on common ingredients, so rare or unusual ingredients might not yield results.

Innovation:

The unique aspect of this project lies in its focus on reducing food waste by recommending practical recipes based on what users already have at home. While there are existing recipe recommendation tools, the integration of AI to analyze random ingredient inputs and provide simple, easy-to-follow recipes makes this tool more user-friendly and efficient. The ability to customize recipes based on minimal ingredients offers a practical, time-saving solution to everyday meal planning.