iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 13 **Issue:** III **Month of publication:** March 2025

DOI: https://doi.org/10.22214/ijraset.2025.67954

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 13 Issue III Mar 2025- Available at www.ijraset.com

Food Recipe Sharing Platform: Cook's Corner

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Abstract: ***With the arrival of the new age of computers, food lovers keep seeking simple and hassle-free ways of finding, trading, and customizing recipes. Cook's Corner is here to serve such purposes—a colourful on-line bulletin board where recipes can be passed around. It is bristling with chic features like user verification, multi-lingual translation of recipes, diet allergy checks, and peer review from fellow cooks. We build the platform using React.js to achieve an interactive front-end experience with the powerful backend on Node.js and Express.js and database management on MongoDB easily. And to make it even more accessible, we provide real-time multilingual support using the Google Translate API, so that all can participate. We employ the Agile Software Development Life Cycle (SDLC) for development and improvement always according to the user's suggestion. This system is about increasing the user experience with smart filtration and interactive UI elements, making it a prominent alternative to sharing dishes. Looking ahead, we are pleased to identify AI-operated personal recipe suggestions and even computer.***

Keywords*: Agile Software Development Life Cycle, Allergy Filters, AI-driven Recommendations, Computer Vision, Dietary Filters, Dietary Restrictions, Google Translate API, Ingredient Detection, Interactive UI, MongoDB, Multilingual Support, Node.js, Personalized Recipes, Recipe Sharing Platform, React.js, Secure Authentication, User Engagement, User Experience, Web Development.***

I. INTRODUCTION

Food is an important element of our culture, and with the internet media, recipes have never been so readily shared and accessed. Most recipe sharing websites today are devoid of personalization elements, language support, and decent diet filtering. This is where Cook's Corner filled the gap—a web-based application whose goal was to make up for those shortcomings by offering a simple, interactive food network wherein food lovers could easily locate, exchange, and categorize recipes. For efficient working and constant updation to be achieved, Cook's Corner is implementing Agile Software Development Life Cycle (SDLC) in a way that constant updation and improvement are carried out on the basis of user feedback. Long-term planning includes combining personalized recipe recommendation through the assistance of AI and computer vision for ingredient recognition and additional more user-tool interaction. The article describes Cook's Corner system design, proposal for implementing, and development plans, but credits it with the existence of a path-finding recipe exchange site. This paper dives into the system architecture, implementation strategies, and future advancements of Cook's Corner, highlighting its role as a cutting-edge recipe-sharing platform.

II. LITERATURE REVIEW

The internet boom has actually revolutionized the sharing and finding of recipes. There are several recipe websites for recipe sharing, but there is limited access, space for addition and alteration. The available options in this category are something that will be explained in more detail later, the flaws that come with it and the voids left by it taken over by Cook's Corner.

Existing Food Recipe-Sharing Websites

Most popular sites like AllRecipes, Tasty, and Yummly provide users with a vast collection of recipes. The sites are simple with functionalities like recipe classification, searching, and user rating. There are a few drawbacks, though:

1) Limited Personalization – Present sites have no AI-driven suggestions based on user preference. Users use manual searching for recipes rather than receiving dynamic suggestions.
2) Lack of Multilingual Support – All of the sites contain only English speakers, and there is very little access for non-English speakers. While there may be minimal translation on certain sites, these are not necessarily correct or automatic.
3) Dietary Restrictions and Allergy Filters – While some websites offer consumers filters to sort recipes according to dietary needs, these lack an effective filter for identifying and eliminating allergies according to specific foods.
4) User Participation and Interactivity– Today's websites are less about presenting static list displays of recipes but more about developing an interactivity website where users can readily edit, share, and comment on recipes as individuals.

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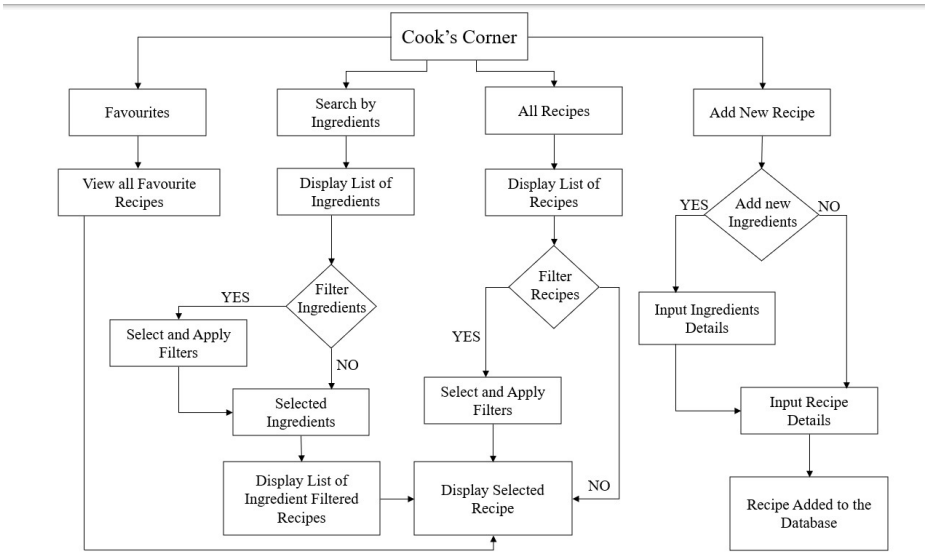
Let us talk about the great world of recipe sharing and how technology is reversing things! Most of these recent works have given us new insights into how Artificial Intelligence (AI), machine learning, and Natural Language Processing (NLP) are revolutionizing our cooking experience in digital space. Beginning from AI-suggested recipes based on individual preference and automated ingredient recognition using computer vision, there's so much expanse to engage with users at a higher level. But the impression is that most popular recipe websites lag far behind such ideas.

III.SYSTEM ARCHITECTURE

The Cook's Corner is a great food recipe-sharing site that's built with a smart system architecture. The layout makes it very simple for users to interact, manage data efficiently, and search for recipes easily. The website is organized into four main sections: Favorites, Search by Ingredients, All Recipes, and Add New Recipe. All of these modules are instrumental in maximizing user interaction and keeping everything organized.

The Favorites module is also really easy for the users to find the saved recipes. The moment a person clicks on this option, the system automatically retrieves all the favourite recipes of the user from the database so that they do not have to go through anything else in order to utilize them. Alternatively, the Search by Ingredients module gives a more individualized way of finding the recipes. Users are shown a list of ingredients that they have at hand and are able to select whether or not to apply filters. If they do apply filters, the system reduces recipes that fit their dietary needs, allergies, or preferred cuisines. But if they don't use filters, they can just choose their ingredients, and the system will give them a list of recipes that fit what they've selected.

The AllRecipes module gives a user access to the whole set of recipes posted. Users are able to access the whole list or apply filters to limit search. Filters such as cuisine, preparation time, and dietary consideration allow users to identify the best-suited recipes. If applied, the system displays only selected recipes that adhere to the filtering criteria; else, it provides the whole list of recipes to browse. This module enhances user satisfaction with the ability to search for recipes according to individual needs and easy access.



The Add New Recipe module is a great feature since it gives the opportunity to share one's personal recipes to the community. In case one wants to add a recipe, it is simple to add new ingredients to the database. When they opt to work with new ingredients, they just give the information, and those are kept in the system. Then, users can enter the recipe details, just linking them to the ingredients they've added, and voilà—the recipe's stored in the database! Where no new ingredients need to be added, users can just enter the recipe details, and the system will do the processing and storage. This adaptive mechanism really keeps the content up-to-date and the recipe database expanding!

The whole system begins with user input, where individuals choose a module suitable for their needs. Once the request is queued, the system comes into action, fetching data from the database, applying filters as needed, and presenting the needed information. The architecture is real-time data handling, so users can have no issues dealing with recipes. Aside from this, the platform is also designed to scale rapidly so as to create opportunities for future improvements like AI-driven personalization, computer vision-driven ingredient detection, and support for translating recipes across several languages.

By blending an organized system with engaging features, Cook's Corner provides a recipe-sharing platform that's simple to use yet sophisticated. The blend of real-time database interactions, smart search filters, and user controls for contributing content truly takes the overall experience to the next level. Future plans involve integrating AI-driven recommendations, blockchain-driven recipe authenticity, and improved accessibility features in the future, which makes Cook's Corner a next-generation food community for foodies across the globe.

IV.MOTIVATION

The inspiration for this research is to create a platform called "Cook Corner". This is not just a recipe site; This is the intention of food lovers to being a vibrant society where they can change new dishes and gather to learn. The current platforms separate it from platforms, focusing on improving the user experience, encouraging inclusion and embracing progress in technology. In the rapidly transporting world of today's technology, where nutrition and food become more important than ever, there is a true requirement for someone who is not only a user -friendly but also available. It tries to provide individual, multilingual and allergen -friendly alternatives to meet the needs of everyone.

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The primary goal here is to create a friendly environment where people can exchange dishes, learn about different recipes and share materials that correspond to the dietary requirements or boundaries. This study is about increasing the properties of the platform to make everyone more accessible and interactive so that "Cook Corner" stands out in a competitive market. By obtaining frequent tests and reactions in the real-world environment, we ensure what the platform actually wants users, easy to cook and shared dishes, is very nice and accessible to everyone.

V. CONCLUSION

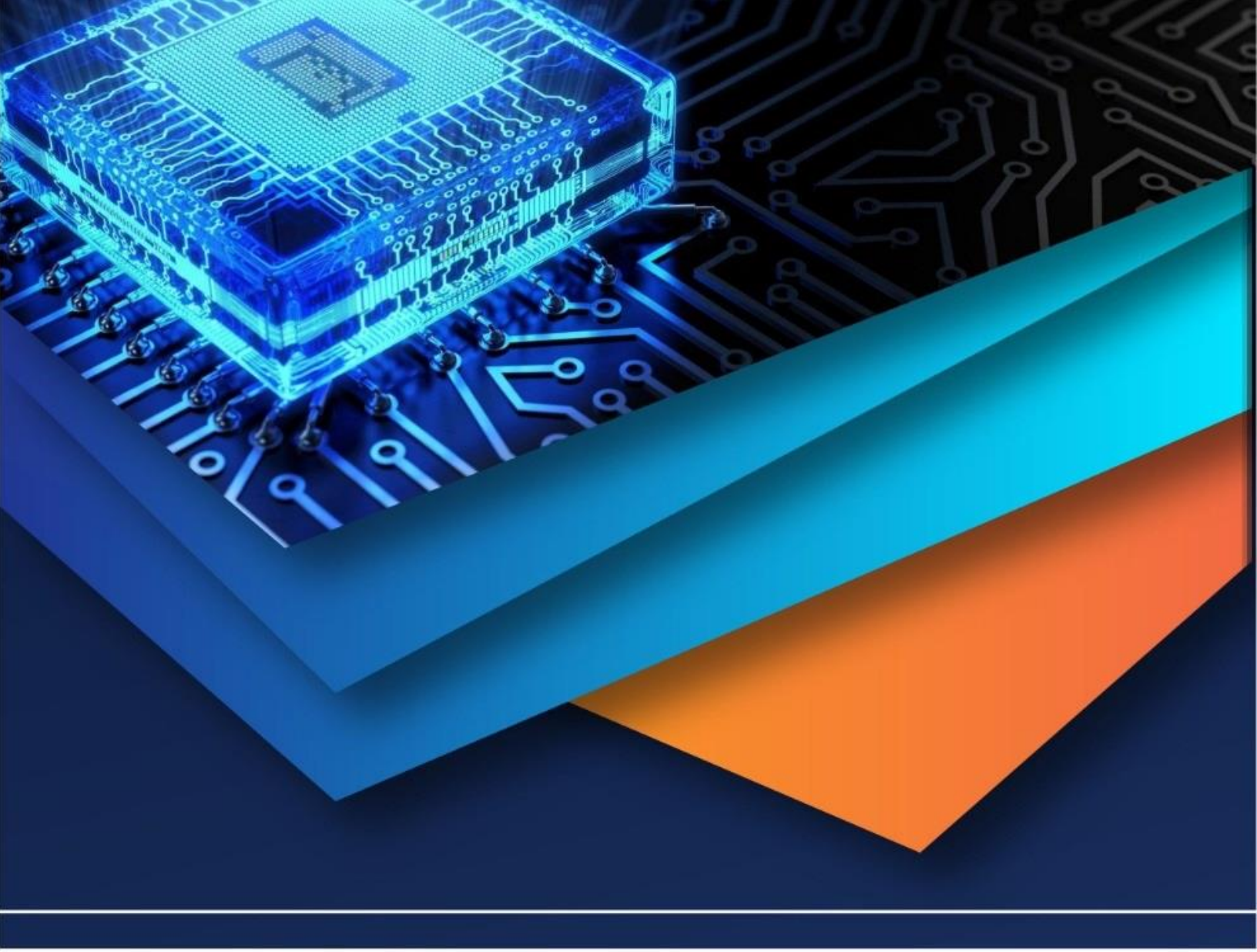
The study for "Cook's Corner" aims to create a food recipe exchange website that focuses on user experience, accessibility, and innovation. Utilizing qualitative, quantitative, experimental, action, and comparative research approaches, the study aims to fill the gaps in the existing market by providing aspects like multilingual support, dietary filters, and allergy support. The research will advise the ongoing improvement of the platform to ensure that it is user-friendly and leverage the latest technologies to meet changing user needs. Ultimately, "Cook's Corner" dreams of becoming one of the finest food technology platforms where users can find, share, and create recipes that suit their taste and dietary needs.

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