

---

# CAPSTONE PROJECT

## INTERACTIVE RECIPE FINDER

**Presented By:**

**Student Name - Shreya Sanjay Todkar**

**College Name - D.Y.Patil College Of Engineering & Technology ,  
Kolhapur**

**Department - Data Science**

# OUTLINE

- Problem Statement
- System Development Approach
- Algorithm & Deployment (Step by Step Procedure)
- Result
- Conclusion
- Future Scope(Optional)
- References

# PROBLEM STATEMENT

- People often struggle to decide what to cook with the ingredients available at home.
- Lack of meal ideas leads to repetitive dishes and reduced food variety.
- Food waste increases when unused ingredients expire due to not knowing how to use them.
- Searching for recipes manually is time-consuming and inconvenient.
- Existing recipe platforms may not provide ingredient-based search or are complex for regular users.
- There is a need for a simple, interactive system that suggests recipes instantly based on available ingredients

# SYSTEM APPROACH

- **Frontend:** Developed using HTML, CSS, and JavaScript for an interactive and user-friendly interface.
- **User Input:** Users enter the list of ingredients they have at home.
- **API Integration:** The system connects with recipe APIs such as Spoonacular or Edamam to fetch recipes that match the input ingredients.
- **Recipe Suggestions:** The app displays recipe options with details like cooking steps, preparation time, and nutritional information.
- **Smart Recommendations:** Prioritizes recipes that require fewer additional ingredients, reducing food waste

# ALGORITHM & DEPLOYMENT

- **Step 1 – Input Collection:** Accept ingredients from the user through a text box or form.
- **Step 2 – API Request:** Use JavaScript fetch() to call the Spoonacular/Edamam API with the given ingredients.
- **Step 3 – Data Processing :** Parse the JSON response to extract recipe titles, ingredients, images, and instructions.
- **Step 4 – Filtering & Sorting:** Rank recipes based on available vs. missing ingredients. Sort recipes by cooking time, calories, or popularity.
- **Step 5 – Output Display:** Show recipe suggestions dynamically using DOM manipulation (HTML & CSS). Provide clickable links/images for detailed instructions.
- **Step 6 – Enhancement (Optional):** Add favorites/bookmark feature. Allow filters (vegetarian, vegan, quick meals, etc.).

# RESULT

The proposed Interactive Recipe Finder application was successfully developed using HTML, CSS, and JavaScript with Spoonacular API integration.

- The system accepts ingredients entered by the user.
- It fetches recipe suggestions dynamically from the API.
- Recipes are displayed with images, titles, and links to detailed cooking steps.
- The application provides a simple, interactive, and user-friendly interface.

---

# CONCLUSION

- The project demonstrates how simple technologies (HTML, CSS, JS) combined with external APIs can create a practical and impactful solution. The application addresses the everyday challenge of deciding meals, ensuring convenience, sustainability, and reduced food waste.

# FUTURE SCOPE(OPTIONAL)

- Add AI-powered personalization to suggest recipes based on dietary history and preferences.
- Provide meal planning and grocery list generation.
- Integrate voice commands (e.g., "What can I cook with tomatoes and eggs?").
- Add offline storage using local databases or PWA (Progressive Web App) features.
- Enable multi-language support for global users.



# REFERENCES

- Spoonacular API – <https://spoonacular.com/food-api>
- Edamam API – <https://developer.edamam.com/>
- Azlaan Khan, Rajeshwari Dandage, “Survey Paper on Recipe Finder Website”. This paper describes a system where the user inputs available ingredients and gets matching recipes, with optional filters like cuisine, cooking time, etc.



**THANK YOU**