Project Proposal: Recipe Classifier

Recipe Classifier using Machine Learning

Objective:

The main goal of this project is to build a system that can automatically tell what type of recipe it is — for example, Indian, Chinese, Italian, or Mexican — just by looking at the list of ingredients.

❓ Why This Project?

There are thousands of recipes online. It takes time to organize or search them by cuisine. A recipe classifier will help in:

- Sorting recipes easily
- Recommending recipes to users
- Making cooking apps smarter

How It Will Work (Simple Steps):

1. **Collect Data:**
   We will use a dataset that contains recipes with ingredients and the type of cuisine.
2. **Clean the Data:**
   Remove extra symbols, convert text to lowercase, and remove common words like "and", "with", etc.
3. **Train a Model:**
   Use a machine learning model (like Naive Bayes or Random Forest) to learn how ingredients relate to cuisines.
4. **Test the Model:**
   Check how well the model works by testing it on new recipes.
5. **Use the Model:**
   Once trained, the model can tell the cuisine of any recipe based on its ingredients.

Tools and Technologies:

- **Language:** Python

- **Libraries:** pandas, scikit-learn, matplotlib
- **IDE:** Jupyter Notebook (Google Colab)

Timeline:

Task	Time Required
Dataset Collection	1 day
Data Cleaning & Preprocessing	2 days
Model Training	2 days
Testing & Evaluation	1 day
Report Writing & Submission	1 day

Expected Output:

- A trained model that can classify recipes based on ingredients.
- A simple interface or script to test the model with your own recipe.