**Recipe Information Retrieval**

**(Project Proposal)**

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**Project Code**

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# Abstract

In this project titled “Recipe Information Retrieval” through information retrieval we will find material of an unstructured nature that satisfies an information need from within large collections of recipe databases. We will create a software application that will be using a large dataset of recipes from all over the world to intelligently generate new and improved recipes having not only great taste but will also contain required nutritional value. And also, these recipes due to their unique taste and nutritious values, will attracted to a wide range of individuals as well as restaurants all around the world. The dataset we will be using will be comprised of roughly 1.5 million recipes and the objective is achieved by using various data scrapping tools. After which the data will be used in training the model for recipe generation using Machine Learning and NLP. And the last phase of this project will be implementing the model into a web application for the ease of access to everyone.

# Background and Justification

Restaurants are always looking to expand their horizons and add new taste to their menus and not just the large chains of five stars but also the smaller scale hotels and restaurants too. In fact, every individual person craves a new taste in life.

Recipe Information Retrieval will provide this service to the world. This project will bring innovations and improvements in the sense of taste and health of an individual.

Recipe Information Retrieval will generate recipes with perfect amount of ingredients and perfect balance with nutrients. Which will result in lesser diseases related to food and better growth of human beings.

We will generate new and improved recipes for every type of people all over the world no matter what their preference is or what region of the world and ethnicity they belong to and what food palette they are used to because we will provide them the recipes they want according to the taste they want which also is great for their nutrition.

# Project Methodology

The primary objectives of this project and how we will achieve them is as follows:

* 1. Using data scrapping techniques to extract data and modeling the dataset regarding recipes using Visual Web Ripper.
  2. Training the model for generation of new recipes using Machine Learning.
  3. The model will process the recipes using NLP (Natural Language Processing).
  4. Implementing the model into a web application for the ease of access to everyone.

# Project Scope

The scope of this project is worldwide. The primary targeted audience of this will be restaurants, hotels, Bed Bath n Beyonds and organizations like this which are always looking for new recipes, new ideas to attract customers and ready to expand their menus, looking for versatility and uniqueness to compete in the international market of food.

Everyone loves to eat, and people want to try new things which will be delicious as well as healthy and people are constantly looking for such recipes which will help us to generate revenue.

Both of the aforementioned categories defines the scope of this project which is global and or ability to generate specific and seemingly perfect recipes for every person of every taste and mind with the perfect blend of ingredients along with perfect balance of nutritional values will be very beneficial.

# High level Project Plan

< This section should contain a high-level project plan with important milestones and their submission dates. It should contain:

1. High level activities for the proposed system
2. Time allocated to each activity
3. Resources that will be assigned to complete each activity

*(Project plan should be developed in MS project*) >

# References

1. Primary idea, Mr. Fahad Maqbool, Lecturer, CS and IT Department, University of Sargodha.