# **CHAPTER 1 INTRODUCTION**

A recommendation system is a filtering system that seeks to predict the preference or rating that would be provided by users. This system can be helpful in many ways, for example: Enhancing user experience, Boosting engagement, Efficiency and Resource optimization, Providing valuable insights into customer preferences and behaviors. Recommendation system is widely used across various industries and applications. However, at present restaurant has become the most popular industries to implement recommendation system. Restaurants have become trendy at present due to several factors. For example: at present most of the people prefer to eat outside than cooking at home due to their busy schedules. Again, while travelling in a new place, it may become hard to find any restaurant that will be able to satisfy the overall preferences. So here the recommendation system will come in handy as it will become less overwhelming to select a restaurant. Recommendation system can be beneficial for a restaurant as it can drive business growth as well as increase customer satisfaction. Customers would be able to find their preferred restaurants with the help of the recommendation system. This study focuses on to develop a recommendation system for a restaurant by building a system model using the existing ML algorithms.

## 1.1 Problem Statement

The restaurant industry has been expanding rapidly in the last few decades due to various reasons. So sometimes the customers might feel overwhelmed by too many options and may find it difficult to decide what restaurant can satisfy their overall preferences. Again, gathering a lot of information regarding customer’s preferences and overall condition of a restaurant becomes stressful without a proper system. Furthermore, in order to attract customers effective marketing is a must. Marketing can be done in many ways, but to create a stronger connection between customers and restaurant a convenient platform will be required.

## 1.2 Thesis Objectives

The main objective of our study is to design a recommendation system using our own system model that would be developed with the help of existing algorithms:

1. To design a user interface consisting of a set of questions regarding the overall experience of a restaurant.

## 1.3 Methodology

**The methodology of the system can be defined in these stages:**

1. **Data Collection:**
   * Data have been collected regarding the overall experience of customers by providing a number of questions (Food Quality, Environment, Hygiene, Serving Time, Price, Satisfaction)
   * Dataset have been organized using Python script
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