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**Subject:** Marketing Analytics

**MAVIN PIZZA**

USING ML MODELS, CONDUCTING RFM AND SEGMENTATION ANALYSIS OF PIZZAS

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# INTRODUCTION

The world of marketing is complicated, and a marketing manager in charge of hundreds of restaurants or a small business owner managing day-to-day operations just don't have the time to put in the work necessary to execute the most successful campaign. It takes time and money to manually analyse and optimize a marketing strategy. The Maven Pizza has records for 2015 but hasn't really been capable of making efficient use of them. To uncover chances to increase sales and operate more productively, I will examine the data and create marketing strategies and an Interactive dashboard from Insights gained by deploying Machine Learning models.

# INDUSTRY ANALYSIS

Worldwide, the pizza industry is worth $160+ billion, with US$20 billion going on advertising every year. The pizza market is now seeing stable expansion, and between 2021 and 2025, it is expected to continue to develop gradually. Pizza providers are particularly keen on increasing their profit by maximizing that expenditure. Many pizza shops continue to market using conventional methods like postcards, door hangers, and magazine ads. Knowing which marketing methods to invest in helps prevent money and effort from being wasted because these firms are not giant corporations with loads of play money.

# DATASET

## Before choosing the dataset, I would be working with, I decided on the industry I wanted to investigate the gap in and offer valuable insights utilizing cutting-edge machine learning techniques. Post that, I came across the dataset on Kaggle.com of a fictitious pizza store. The data set includes annual sales information for a hypothetical pizza restaurant, as well as information on the type, size, number, price, and ingredients of each pizza served as well as the date and time of each order.

***Link to Dataset:*** [*https://www.kaggle.com/datasets/neethimohan/maven-pizza-challenge-dataset*](https://www.kaggle.com/datasets/neethimohan/maven-pizza-challenge-dataset)

# RESEARCH ON MARKET PROBLEM

Pizza joints may monitor and pinpoint consumer behaviour and demands using machine learning technologies. The information gathered may then be utilized to create tailored products that cater to those demands and increase sales for the business. It is sufficient to state that machine learning and artificial intelligence will have a big impact on the food business in the future. As a result, it is crucial for businesses involved in the production and distribution of food to immediately adopt these technologies to maintain a successful, steady operation.

# PROJECT OBJECTIVES

* Utilize Machine Learning methods/models to perform RFM analysis on the current product lines, assist in product classification and cross-marketing initiatives, and increase sales of items that are in danger.
* The RFM study will assist in determining which items, in terms of their pricing and sales volume, are at risk.
* The segmentation study will assist in determining which pizza category/segment has the most profitability and sales, which, when combined with an upselling and cross-marketing plan, may help stabilize the erratic sales.
* Since the prices haven't changed since 2015, I would ultimately be forecasting the price of the pizzas in various categories by adjusting them with the inflation rate from 2015 to 2023.

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# SCOPE AND OUTCOME OF PROJECT

After completing this assignment, I want to show how well I grasp the topic and decide which qualities to highlight to create a marketing plan. This baseline methodology may be used to identify the product categories that need to have their prices altered owing to low sales and can be combined with promotional offers for pizzas that sell well to keep the product stable. Additionally, by doing this, we may get rid of the pizza categories that are in danger of going out of business. Additionally, the interactive dashboards will aid in addressing speculative queries about the company's performance.