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Predictive Analytics for Tortillas



# Introduction

## Problem

One of the challenges businesses always face in the restaurant industry is the inability to predict the number of guests each day. Without a reliable way of predicting how many people will walk through the door, restaurants often deal with inefficiencies Overstaffing leads to unnecessary labor costs, while understaffing can lead to long wait times, poor service, and dissatisfied customers. Also, incorrect estimates of guest counts can lead to excessive food preparation, resulting in wasted inventory and increased costs.

## Idea

Understanding the significance of tackling this problem, predictive analytics can be utilized to forecast daily visitor numbers. By considering various factors such as historical visitor data, weather conditions, local events like PSV matches, Effenaar concerts, train delays, etc., a reliable model can be developed to predict future demand accurately.

## Solution

The proposed solution involves developing a custom predictive analytics model tailored to meet the restaurant's needs. Through thorough data analysis, important trends and patterns will be identified. These insights will guide the creation of a predictive model capable of accurately forecasting daily guest numbers.

By implementing this predictive model, informed decisions can be made regarding staffing levels and inventory management. Staffing schedules can be adjusted based on expected demand, ensuring there are enough staff members during busy times. Additionally, inventory levels can be managed more efficiently to match predicted guest counts, reducing waste and costs.

Ultimately, using predictive analytics in restaurant operations promises to improve efficiency, enhance customer satisfaction, and drive long-term success in a competitive industry. By anticipating changes in demand and organizing resources accordingly, the restaurant can improve its operations and provide exceptional experiences to its customers.

# Plan overview

## Stakeholders

As a member of the "Tortillas" restaurant team, my primary stakeholder is the boss/owner, who will oversee the project's progress. The boss/owner will also liaise with other relevant individuals who can provide datasets or information necessary for the project. Additionally, input and feedback from teachers will be crucial for refining the project.

## Timeline

The project will span until week 16 and will be divided into three distinct phases: A, B, and C, with a midterm evaluation included. Each phase will have specific objectives and deliverables, ensuring steady progress towards project completion within the designated timeframe.

## Resources

To gather information about the restaurant, the boss/owner will provide relevant data and insights. Additionally, external sources such as the internet, events like Effenaar or PSV matches, and transportation services like NS will be utilized for datasets and calendar information. Efforts will also be made to explore available APIs, such as those provided by NS, to access relevant data efficiently.