

Recipe Site Traffic

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Introduction

Tasty Bytes is a recipe website that provides a variety of recipes to its users.

Currently, the team selects their preferred recipe from a pool and showcases it on the homepage.

They have observed that displaying a popular recipe can increase the website traffic by up to 40%, but they do not have a method to determine the recipe's popularity in advance.

More traffic means more subscriptions so this is really important to the company.



Business Goals



1

Identify the popular recipes

Predict which recipes will result in high traffic by identifying the key features.



2

Correctly predict high traffic recipes 80% of the time

Develop Machine Learning methods to predict recipe popularity.

The dataset - 947 recipes



Calories

Number of
calories



Protein

Amount of protein
in grams



Sugar

Amount of
sugar in grams



Carbohydrate

Amount of
carbohydrates in
grams



Servings

Number of
servings for the
recipe



Category

We have 10
recipe
categories

Methodology: How we approached the problem

Clean the data

Remove errors and inconsistencies

Validate the data

Ensure the data type are correct

Exploratory Data Analysis

Analyse and visualize data

ML techniques

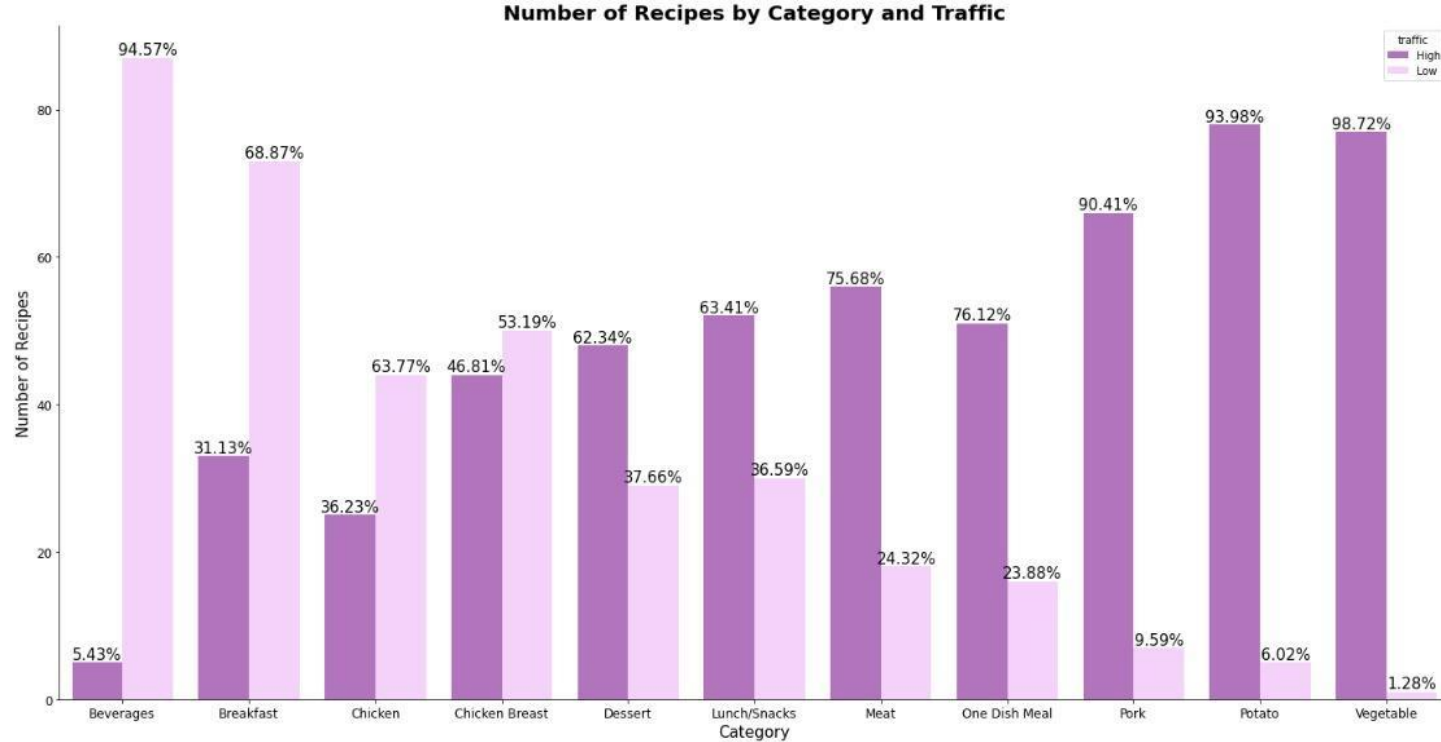
Train and evaluate models

Results

Summarize and interpret findings

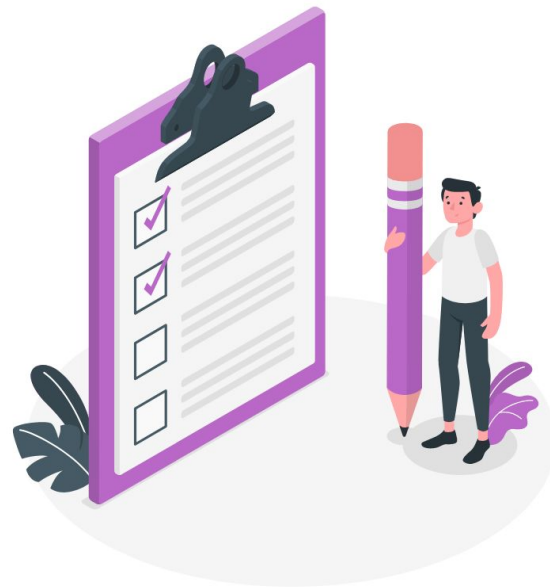


Exploratory Data Analysis



Feature selection

	Feature	Feature	Feature
Strong positive association	Vegetable	Potato	Pork
Strong negative association	Beverages	Breakfast	Chicken
Weak association	Servings	Protein	Calories



Machine Learning techniques

83%



Logistic Regression

81.6%



Gradient Boosting

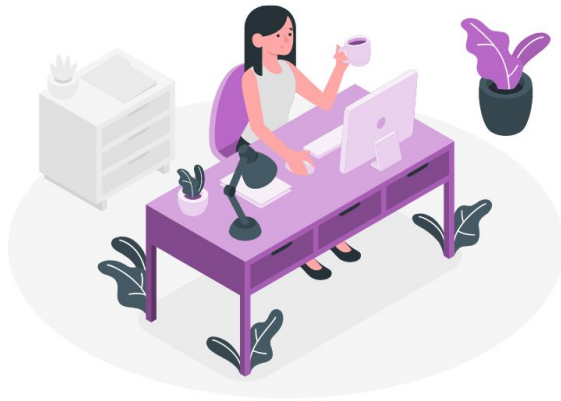
We measured how well the models were able to predict which recipe will be popular using a measure called **accuracy**. It compares the predictions to the actual outcomes.

Business metrics

- Given the goal to increase website traffic and the data available, a potential business metric could be the percentage of high-traffic recipes.
- In our dataset, **60%** of the recipes are considered high-traffic.
- In the future, if this percentage increases, it indicates a successful increase in website traffic.

Obs! The available data is insufficient to develop a relevant business metric.





Recommendations

Increase and reduce the number of recipes from some categories

We recommend that Tasty Bytes display more recipes from categories such as Vegetable, Potato, and Pork while reducing the number of Beverages and Breakfast recipes.

Including other important factors

We suggest including other important factors such as recipe ingredients, preparation time, instructions, and overall appeal of the recipe on the site.

How is the traffic measured?

Although it was noted that displaying popular recipes increases website traffic by up to 40%, it's unclear how the traffic it's measured. Knowing whether it's measured by recipe views or user interactions can help us define better business metrics like **CTR** or **CR**.



Click-through rate

Measures the percentage of users who view a recipe and click on it.



Conversion rate

Measures the percentage of users who view high-traffic recipes and then interact with them.

Thank you!
