

The image displays three sequential screenshots of a Jupyter Notebook environment, showing the progression of a data analysis project for recipes.

Top Screenshot: The notebook is titled "TMprojectUTTRAKHANDRecipes". It shows the initial setup of the environment, including importing necessary libraries (pandas, numpy, matplotlib, collections, Counter, re) and mounting the Google Drive folder containing the data. The code cells show the following steps:

```
[1] import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from collections import Counter
import re

[2] from google.colab import drive
drive.mount('/content/drive')

root_path = '/content/drive/MyDrive/'

Mounted at /content/drive

[3] data_path = 'TM-PROJECT/Uttarakhand_recipes'
data_path

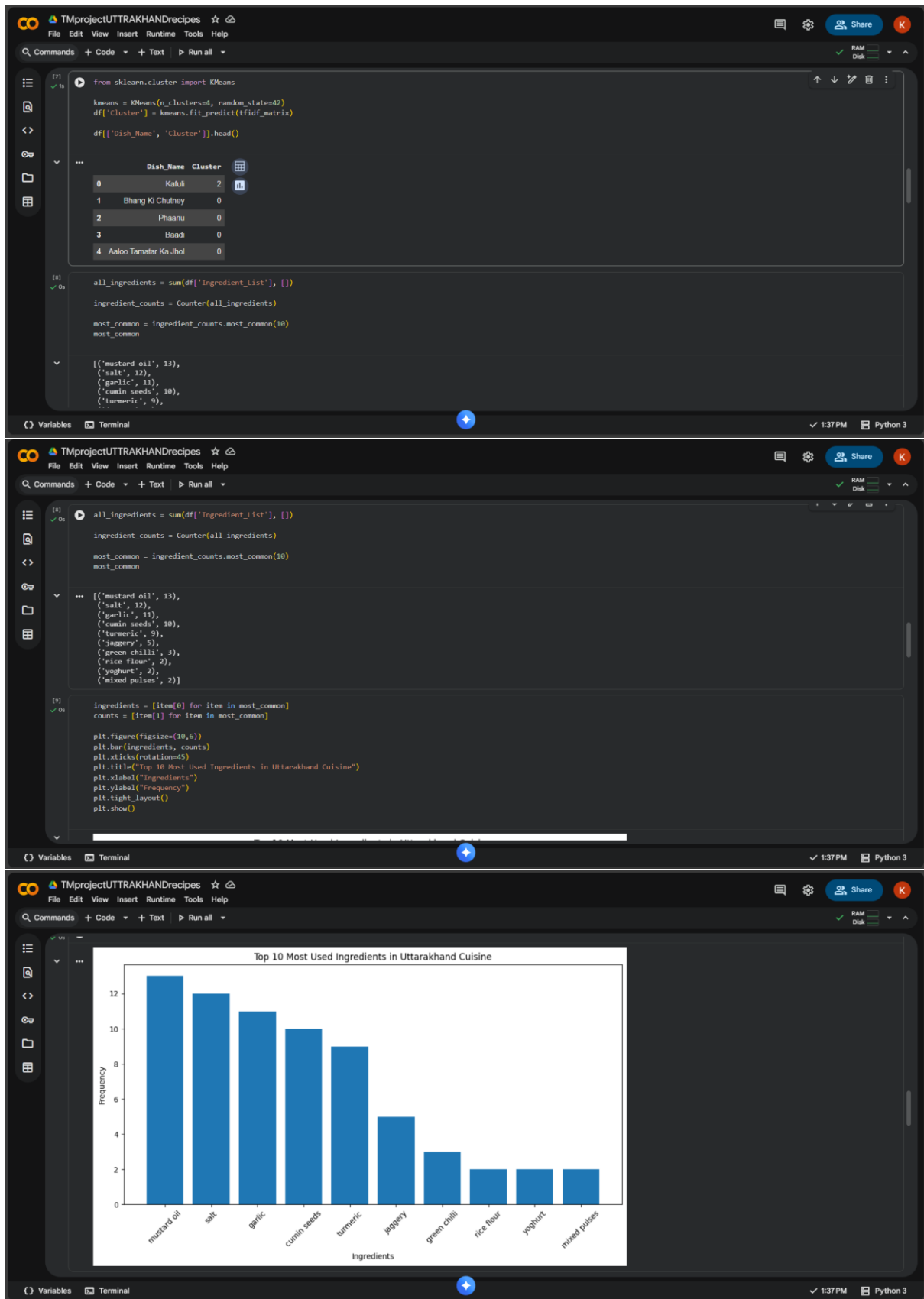
'TM-PROJECT/Uttarakhand_recipes'

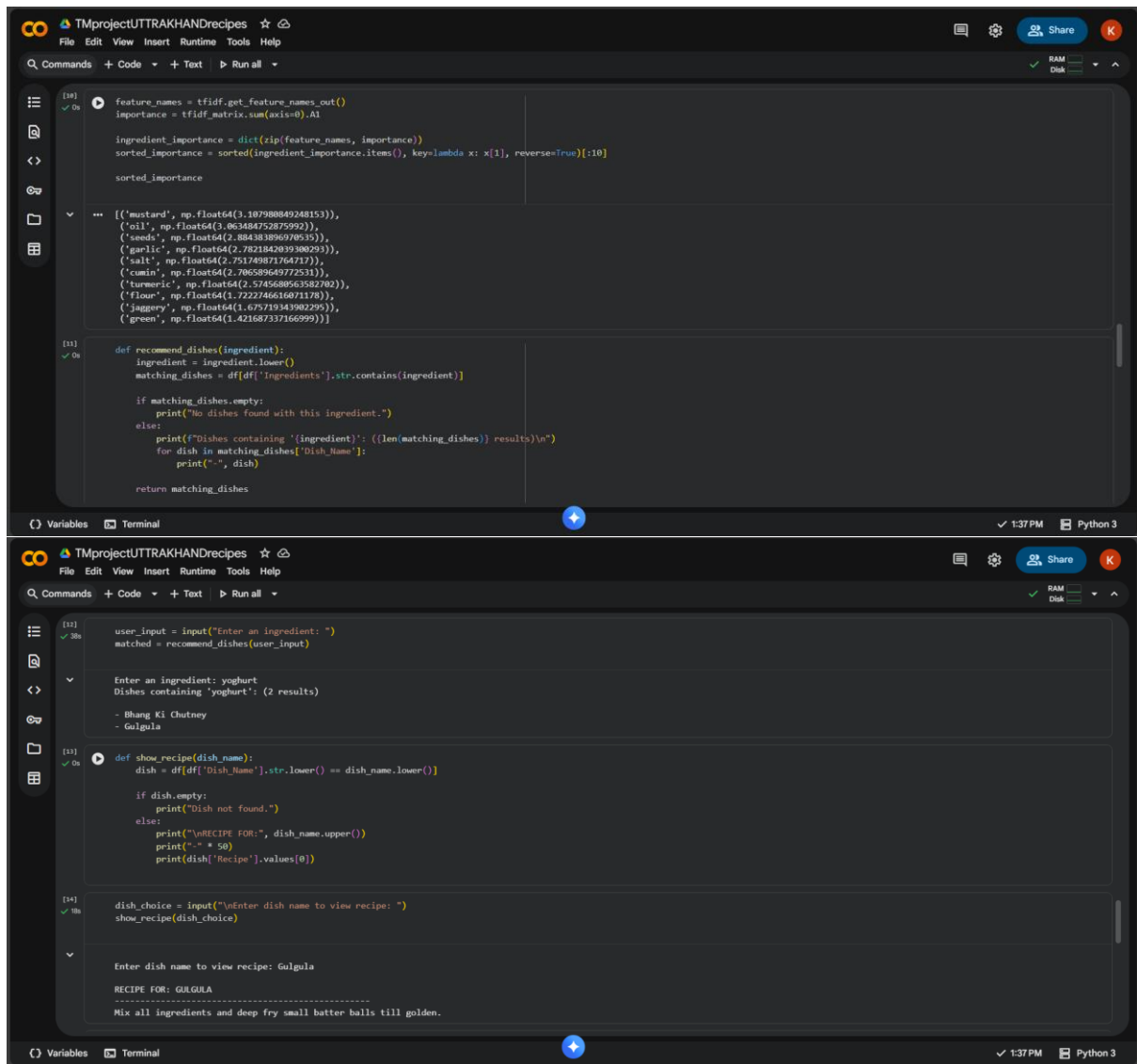
[4] df = pd.read_csv(root_path + "TM-PROJECT/uttarakhand_recipes.csv")
df['Ingredients'] = df['Ingredients'].str.lower()
df['Ingredients'] = df['Ingredients'].str.replace(['a-zA-Z'], '', regex=True)
df.head()
```

Middle Screenshot: This screenshot shows the data being loaded and cleaned. The first cell displays the first few rows of the dataset, which includes columns for Dish Name, Ingredients, and Recipe. The second cell shows the result of applying a lambda function to the 'Ingredients' column to strip non-alphabetic characters. The third cell shows the result of applying the same function to the 'Dish Name' column. The fourth cell shows the result of applying the same function to the 'Recipe' column.

Dish_Name	Ingredients	Recipe	
0	Kafuli	spinach, fenugreek leaves, mustard oil, garlic...	Wash and finely chop spinach and fenugreek lea...
1	Bhang Ki Chutney	hemp seeds, yoghurt, lemon juice, garlic, cumi...	Dry roast hemp seeds and grind into a fine pas...
2	Phaanu	mixed pulses, mustard oil, cumin seeds, garlic...	Soak mixed pulses overnight and grind into a c...
3	Baadi	urad dal flour, mustard oil, turmeric, cumin s...	Mix urad dal flour with water and spices to fo...
4	Aaloo Tamatar Ka Jhol	potatoes, tomatoes, mustard oil, cumin seeds, ...	Heat mustard oil, add cumin seeds. Add chopped...

Bottom Screenshot: This screenshot shows the data being processed and analyzed. The first cell shows the result of applying the lambda function to the 'Ingredients' column. The second cell shows the result of applying the same function to the 'Dish Name' column. The third cell shows the result of applying the same function to the 'Recipe' column. The fourth cell shows the result of applying the same function to the 'Recipe' column. The fifth cell shows the result of applying the same function to the 'Recipe' column. The sixth cell shows the result of applying the same function to the 'Recipe' column. The seventh cell shows the result of applying the same function to the 'Recipe' column. The eighth cell shows the result of applying the same function to the 'Recipe' column. The ninth cell shows the result of applying the same function to the 'Recipe' column. The tenth cell shows the result of applying the same function to the 'Recipe' column. 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The image displays two screenshots of a Jupyter Notebook interface, likely from a web browser, showing Python code for ingredient importance and recipe recommendation.

Top Screenshot:

- Code Cell (10):** Calculates ingredient importance using TF-IDF. It uses `tfidf.get_feature_names_out()` and `tfidf.matrix.sum(axis=0).A1` to get importance scores. It then creates a dictionary `ingredient_importance` and sorts it by importance in descending order, returning the top 10 ingredients.
- Output:** A list of 10 ingredients and their importance scores, sorted in descending order:
 - ['mustard', np.float64(3.187980849248153)),
 - ('oil', np.float64(3.063484752875992)),
 - ('seeds', np.float64(2.884383896970535)),
 - ('garlic', np.float64(2.792184209393802953)),
 - ('salt', np.float64(2.751749871764717)),
 - ('cumin', np.float64(2.706589649772531)),
 - ('turmeric', np.float64(2.5745680563582702)),
 - ('flour', np.float64(1.7222746616971178)),
 - ('jaggery', np.float64(1.676719343982295)),
 - ('green', np.float64(1.421687337166999))]
- Code Cell (11):** Defines a function `recommend_dishes(ingredient)` that takes an ingredient name as input. It uses `df[df['Ingredients'].str.contains(ingredient)]` to find matching dishes. If no dishes are found, it prints a message. Otherwise, it prints the number of matching dishes and lists them.
- Output:** The function is called with `ingredient = 'yoghurt'`. The output is:
 - Enter an ingredient: yoghurt
 - Dishes containing 'yoghurt': (2 results)
 - Bharg Ki Chutney
 - Gulgula

Bottom Screenshot:

- Code Cell (12):** Defines a function `show_recipe(dish_name)` that takes a dish name as input. It uses `df[df['Dish_Name'].str.lower() == dish_name.lower()]` to find the recipe. If no recipe is found, it prints a message. Otherwise, it prints the recipe name and the recipe itself.
- Output:** The function is called with `dish_name = 'Gulgula'`. The output is:
 - Enter dish name to view recipe: Gulgula
 - RECIPE FOR: GULGULA
 - Mix all ingredients and deep fry small batter balls till golden.

