# Data-Driven Recommendations Strategy for the Food & Beverage Industry









Excel (Data Collection in the Form of CSV)

Power BI (Data Modeling & Building Interactive Dashboard for Business Decisions)

Python (Data Cleaning & Statistical Analysis)

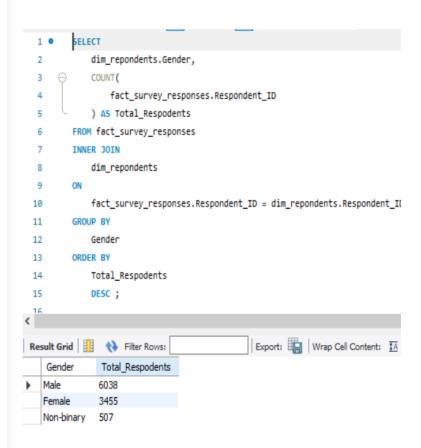
SQL (Data Store & Ad-Hoc Insights)

# CodeX

- a German beverage company, launched an energy drink in 10 Indian cities.
- The Marketing team aims to increase brand awareness, market share, and product development.
- A survey of 10,000 respondents was conducted to gather insights.

#### **DEMOGRAPHIC INSIGHTS**

 Who prefers energy drink more? (male/female/non-binary)



Which age group prefers energy drinks more

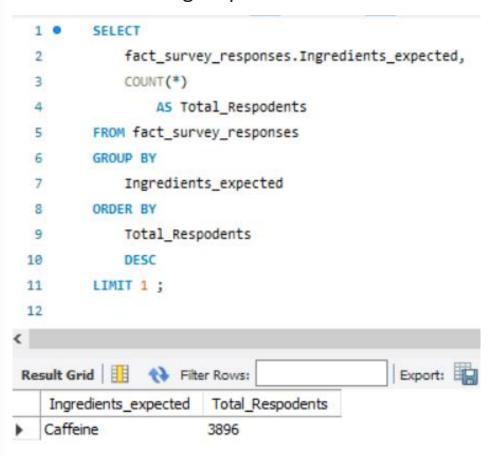
```
dim_repondents.Age,
                 fact_survey_responses.Respondent_ID
             ) AS Total_Respodents
         FROM fact_survey_responses
             dim_repondents
             fact_survey_responses.Respondent_ID = dim_repondents.Respondent_ID
11
         GROUP BY
12
             Age
         ORDER BY
             Total_Respodents
 15
 16
         LIMIT 1 :
                                               Export: Wrap Cell Content: IA
           Filter Rows:
           Total_Respodents
19-30
```

Which type of marketing reaches the most Youth (15-30)

```
25
         SELECT
26
27
             Marketing_channels
         FROM cities
29
30
             Ranking = 1
31
             AND Age in ('15-18', '19-30');
Result Grid
           Filter Rows:
                                            Export
           Marketing_channels
          Online ads
   19-30
```

#### **CONSUMER PREFERENCES**

What are the preferred ingredients of energy drinks among respondents



 What packaging preferences do respondents have for energy drinks

```
SELECT
             fact_survey_responses.Packaging_preference,
             COUNT(*)
                  AS Preferences
         FROM fact_survey_responses
         GROUP BY
             Packaging_preference
         ORDER BY
             Preferences
             DESC ;
10
Result Grid
                Filter Rows:
                                                  Export:
   Packaging_preference
                             Preferences
   Compact and portable cans
                             3984
   Innovative bottle design
                             3047
   Collectible packaging
                             1501
   Eco-friendly design
                             983
   Other
                             485
```

#### **COMPETITION ANALYSIS**

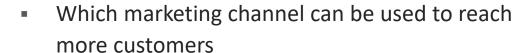
Who are the current market leaders

```
SELECT
             fact_survey_responses.Current_brands,
             COUNT(*)
                 AS Frequency
         FROM fact_survey_responses
         GROUP BY
             Current_brands
         ORDER BY
             Frequency
10
             DESC
11
         LIMIT 1;
Result Grid
                   Filter Rows:
                                                Expor
   Current_brands
                   Frequency
   Cola-Coka
                  2538
```

 What are the primary reasons consumers prefer those brands over ours

```
SELECT
             fact_survey_responses.Consume_reason,
             COUNT(*)
                 AS Total_Respodents
         FROM fact survey responses
  5
         GROUP BY
             Consume_reason
         ORDER BY
             Total_Respodents
             DESC
10
11
         LIMIT 1;
Result Grid
                Filter Rows:
                                                 Export:
                             Total_Respodents
   Consume_reason
  Increased energy and focus
                             3574
```

# MARKETING CHANNELS AND BRAND AWARENESS



```
SELECT
             fact_survey_responses.Marketing_channels
         FROM fact_survey_responses
         GROUP BY
             Marketing_channels
         ORDER BY
             COUNT(*)
             DESC
 9
         LIMIT 1;
10
Result Grid
                                                  Export: |
   Marketing_channels
```

 How effective are different marketing strategies and channels in reaching our customers

```
1 • @ WITH marketing AS (
         SELECT
             fact_survey_responses.Marketing_channels,
             COUNT(*) AS Total_Respodents
             FROM fact_survey_responses
         WHERE
             fact_survey_responses.Current_brands = 'Codex'
             Marketing channels
10
      SELECT Marketing_channels, ROUND(
11
12
             (Total_Respodents / (
                 SELECT
13
14
                      SUM(Total_Respodents)
15
                  FROM marketing
             ) * 100 ),2) AS Percentage
         FROM marketing
17
18
         ORDER BY
19
             Percentage DESC ;
Result Grid | Filter Rows:
                                             Export: Wrap C
   Marketing channels
                       Percentage
  Online ads
                      41.94
   TV commercials
                      26.63
   Outdoor billboards
                      12.14
   Other
                      11.84
  Print media
                      7.45
```

#### **BRAND PENETRATION**

 What do people think about our brand (overall rating)

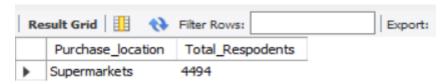
```
SELECT
             fact_survey_responses.Current_brands,
             ROUND (
             AVG(Taste_experience),0)
                 AS Overall_Rating
         FROM fact_survey_responses
         WHERE
             fact_survey_responses.Current_brands = 'Codex';
Result Grid
                    Filter Rows:
   Current brands
                   Overall Rating
  CodeX
```

Which cities do we need to focus more on

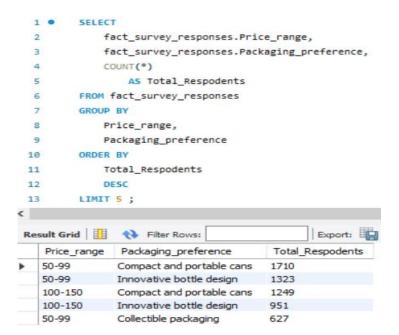
```
1 ● ⊖ WITH cities AS (
         SELECT
            dim_cities.City,
            COUNT(*) AS Total_Respodents
         FROM fact survey responses
         INNER JOIN dim_repondents
         ON fact_survey_responses.Respondent_ID = dim_repondents.Respondent_ID
         INNER JOIN dim_cities
         ON dim_repondents.City_ID = dim_cities.City_ID
         WHERE fact_survey_responses.Current_brands = 'CodeX'
10
         GROUP BY City )
11
         SELECT City,
12
            ROUND( (
13
14
                 Total_Respodents / ( SELECT
                         SUM(Total_Respodents) FROM cities
15
                ) * 100 ),2) AS Percentage
16
         FROM cities
17
18
         ORDER BY Percentage DESC
19
         LIMIT 3
                                           Export: Wrap Cell Content: IA
Result Grid Filter Rows:
   City
               Percentage
  Bangalore
              29.80
   Hyderabad
              18.57
   Mumbai
               15.92
```

#### **PURCHASE BEHAVIOR**

Where do respondents prefer to purchase energy drinks



 What factors influence respondents' purchase decisions, such as price range and limited edition packaging

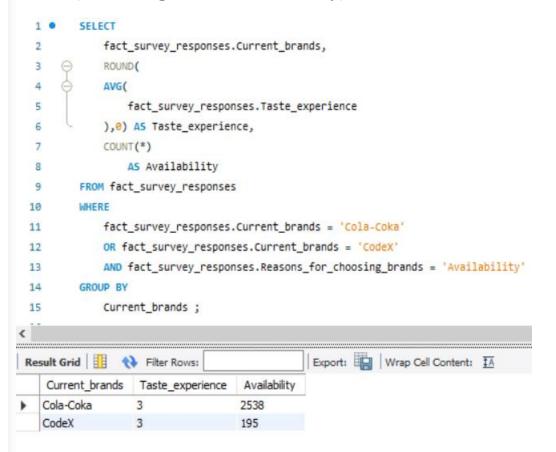


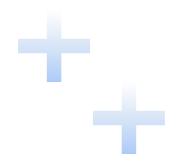
 What are the typical consumption situations for energy drinks among respondents

```
SELECT
             fact_survey_responses.Typical_consumption_situations
         FROM fact_survey_responses
         GROUP BY
             Typical consumption situations
         ORDER BY
             COUNT(*)
             DESC ;
Result Grid
                 Filter Rows:
   Typical_consumption_situations
  Sports/exercise
   Studying/working late
   Social outings/parties
   Other
   Driving/commuting
```

#### PRODUCT DEVELOPMENT

 Which area of business should we focus more on our product development (Branding/taste/availability)





# **KEY TAKEWAYS**

- The Male (15-30) demographic is the primary consumer of energy drinks.
- Consumers prefer natural ingredients, lowsugar options, and eco-friendly packaging.
- Product innovation focusing on these aspects can increase brand appeal.
- Convenience stores and online platforms dominate purchases.

### **RECOMMENDATION**

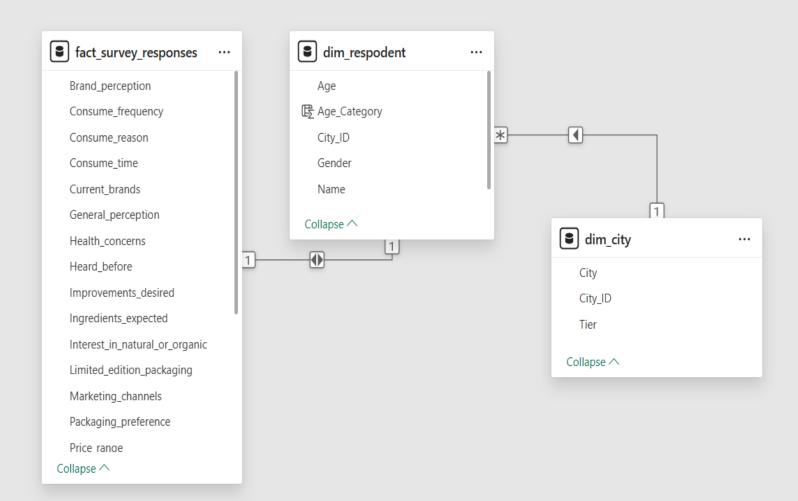
- Leverage social media, influencer collaborations, and esports sponsorships to attract the 15-30 age group.
- Introduce low-sugar, natural ingredient, and functional energy drink options.
- Strengthen partnerships with convenience stores and online marketplaces.
- Expand availability in high-potential but underperforming cities.

## 13 Growth strategy

- Strengthen presence in high-potential cities with low brand awareness
- Introduce low-sugar, organic, and functional energy drink variants (with vitamins, adaptogens).
- Implement subscription models and directto-consumer (DTC) sales for online growth.



#### **DATA MODELING**



#### **DASHBOARD**



Ahmedabad

City

3.28
Average of Taste\_experience

Chennai

Delhi

Min of Taste\_experience

Hyderabad

Max of Taste\_experience

Kolkata

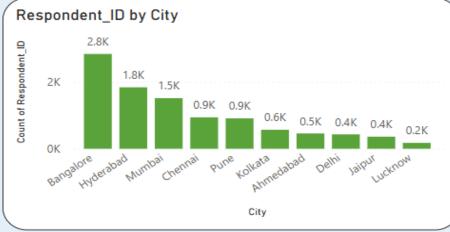
Lucknow



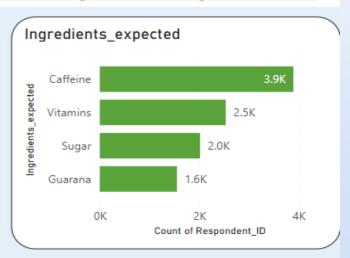
Pune



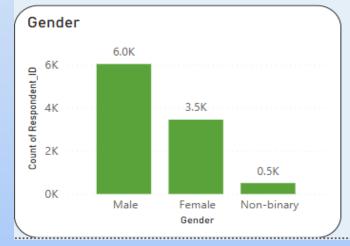
Bangalore

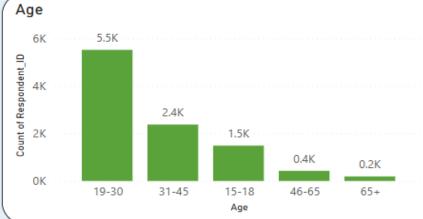


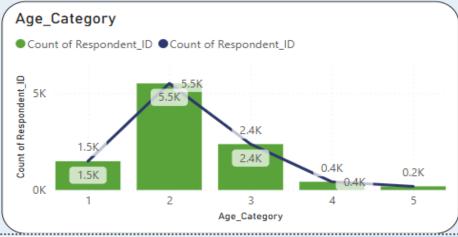
Jaipur



Mumbai

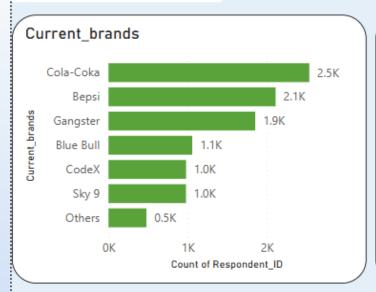


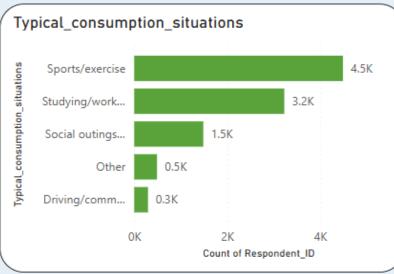




Count of Respondent\_ID 10K

Bepsi Blue Bull CodeX Cola-Coka Gangster Others Sky 9





Packaging_preference	100-150	50-99	Above 150	Below 50
Collectible packaging	475	627	248	151
Compact and portable cans	1249	1710	622	403
Eco-friendly design	310	431	141	101
Innovative bottle design	951	1323	464	309
Other	157	197	86	45

