Looker Studio Project

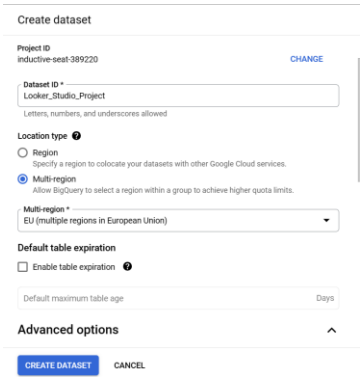
1. Understanding the available data by exploring the schemas and some extracts of the datasets.

✓ **Listing Table:**
- id (string): The ID of the rental.
- room_type (string): The type of rental (e.g., entire home, private room).
- host_response_time (string): The average response time displayed in Airbnb to customers.
- review_scores_value (float): The average review score for the rental.

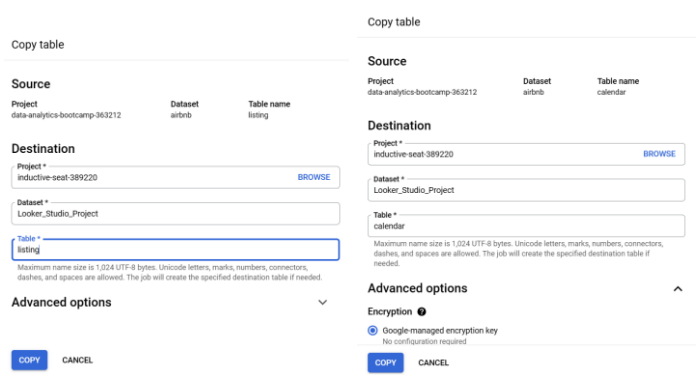
✓ **Calendar Table:**
- listing_id (string): The ID of the rental.
- date (date): The date of the rental or non-rental.
- available (boolean): Indicates the availability of the rental.
- price (float): The price for the specific date.

2. Joining the tables to create a single source for analysis.

1. create dataset

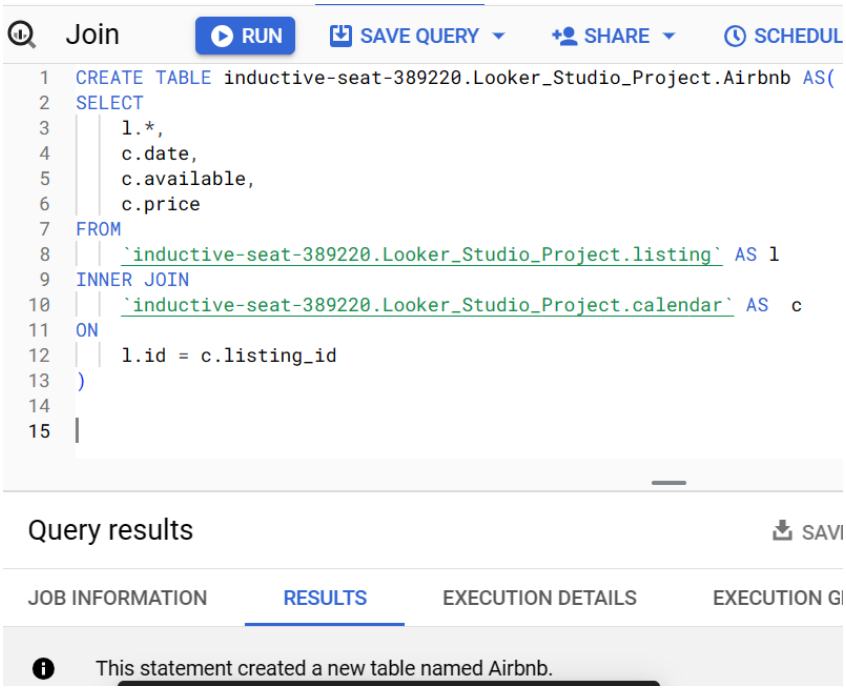


2. Copy tables



3. make join

https://console.cloud.google.com/bigquery?sq=70374119533:c5495bc93d7248a18ae5625a1705f444



Looker Studio Project

3. Exploring the data as is, without additional transformation, to get an idea of the main metrics and analysis you will be able to perform.

   https://console.cloud.google.com/bigquery?sq=70374119533:eadfd7d94a4c413aba6434b480e04ba0

1. Room Type Distribution

Exploration RUN SAVE QUERY SHA

```
SELECT
    room_type,
    COUNT(*) AS count
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    room_type;
```

Query results

JOB INFORMATION | RESULTS | CHART | JSON

Row	room_type	count
1	Private room	7073
2	Entire home/apt	64884
3	Shared room	144

2. Host Response Time Distribution

Exploration RUN SAVE QUERY SHA

```
#2. Host Response Time Distribution:
SELECT
    host_response_time,
    COUNT(*) AS count
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    host_response_time;
```

Query results

JOB INFORMATION | RESULTS | CHART | JSON

Row	host_response_time	count
1	within an hour	30417
2	within a few hours	20623
3	within a day	17892
4	a few days or more	3169

3. Review Scores Distribution

Exploration RUN SAVE QUERY SHAI

```
#3. Review Scores Distribution:
SELECT
    review_scores_value,
    COUNT(*) AS count
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    review_scores_value
```

Query results

JOB INFORMATION | RESULTS | CHART | JSON

Row	review_scores_value	count
1	4.56	865
2	4.84	1442
3	4.68	1731

```
SELECT
    min(review_scores_value) AS min,
    max(review_scores_value) AS max,
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
```

Query results

JOB INFORMATION | RESULTS | CHART | JSON

Row	min	max
1	2.33	5.0

Looker Studio Project

4. Availability Over Time

Exploration RUN SAVE QUERY SHARE

```
#4. Availability Over Time
SELECT
    date,
    COUNT(*) AS total_listings,
    SUM(CASE WHEN available THEN 1 ELSE 0 END) AS available_count
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    date
```

Query results SAV

JOB INFORMATION | RESULTS | CHART | JSON | EXECUTION D

Row	date	total_listings	available_count
1	2022-09-29	500	41
2	2023-01-15	500	189

5. Price Variation Over Time

```
#5. Price Variation Over Time:
SELECT
    date,
    ROUND(AVG(price),2) AS avg_price
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    date
```

Query results

JOB INFORMATION | RESULTS | CHART | JSON

	date	avg_price
1	2022-09-29	156.55
2	2023-01-15	157.33

❖ KPIs

https://console.cloud.google.com/bigquery?sq=70374119533:d460f0f226964ade9cfe0ee68be2e881

A. Average Price: This KPI gives an overview of the typical price of rentals.

KPIs RUN

```
#1. Average Price
SELECT
    ROUND(AVG(price),2) AS avg_price
FROM
    `inductive-seat-389220.Looker_Studio_Project.Airbnb`
```

Press Alt+F1 fo

Query results SAVE RESULTS EXPLORE

JOB INFORMATION | RESULTS | CHART | JSON

Row	avg_price
1	158.02

Looker Studio Project

B. Price Distribution: Understanding the distribution of prices can help identify pricing segments.

KPIs RUN

```sql
SELECT
    first_quartile_price,
    median_price,
    third_quartile_price,
    max_price
FROM (
    SELECT
        PERCENTILE_CONT(price, 0.25) OVER () AS first_quartile_price,
        PERCENTILE_CONT(price, 0.50) OVER () AS median_price,
        PERCENTILE_CONT(price, 0.75) OVER () AS third_quartile_price,
        MAX(price) OVER () AS max_price
    FROM
        `inductive-seat-389220.Looker_Studio_Project.Airbnb`
) subquery
```

Press Alt+F1 for Accessibility Op

Query results SAVE RESULTS EXPLORE DATA

RESULTS CHART JSON EXECUTION DETAILS EXECUTIC

Row	first_quartile_price	median_price	third_quartile_price	max_price
1	85.0	120.0	175.0	4000

C. Price Trends Over Time: Analyzing price trends over time can reveal seasonal variations or market trends.

KPIs RUN

```sql
#3.Price Trends Over Time
SELECT
    EXTRACT(YEAR FROM date) AS year,
    EXTRACT(MONTH FROM date) AS month,
    ROUND(AVG(price),2) AS avg_price
FROM
    `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    year, month
ORDER BY
    year, month
```

Press Alt+F1

Query results SAVE RESULTS EXPLO

JOB INFORMATION RESULTS CHART JSON

Row	year	month	avg_price
1	2022	9	158.15
2	2022	10	157.85

Looker Studio Project

D. Price Competitiveness: Comparing prices of rentals with similar characteristics can assess competitiveness.

```sql
#4.Price Competitiveness
SELECT
    room_type,
    ROUND(AVG(price),2) AS avg_price
FROM
    `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    room_type
```

Press Alt+F1 for

Query results SAVE RESULTS EXPLORE

JOB INFORMATION | RESULTS | CHART | JSON

Row	room_type	avg_price
1	Private room	87.39
2	Entire home/apt	165.98
3	Shared room	41.44

4. Returning to SQL if you want to perform more advanced calculations. https://console.cloud.google.com/bigquery?sq=70374119533:1edc9b0db1e44fddac54675102945d64

1. Monthly Average Availability

Advanced cal... RUN

```sql
#1. Monthly Average Availability
SELECT
    EXTRACT(YEAR FROM date) AS year,
    EXTRACT(MONTH FROM date) AS month,
    COUNT(*) AS total_listings,
    SUM(CASE WHEN available THEN 1 ELSE 0 END) AS available_count,
    AVG(IF(available, 1, 0)) AS avg_availability
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    year, month
ORDER BY
    year, month;
```

Press Alt+F1 for Accessibility

Query results SAVE RESULTS EXPLORE DATA

JOB INFORMATION | RESULTS | CHART | JSON | EXECUTION DET

Row	year	month	total_listings	available_count	avg_availability
1	2022	9	10601	732	0.069050089614...
2	2022	10	15500	2113	0.136322580645...

2. Price Variation by Room Type

Advanced cal... RUN

```sql
#2. Price Variation by Room Type
SELECT
    room_type,
    EXTRACT(YEAR FROM date) AS year,
    AVG(price) AS avg_price
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    room_type, year
ORDER BY
    room_type, year
```

Press Alt+F1 fo

Query results SAVE RESULTS EXPLORE

JOB INFORMATION | RESULTS | CHART | JSON | EX

Row	room_type	year	avg_price
1	Entire home/apt	2022	165.5970078925...
2	Entire home/apt	2023	167.3704659498...

Looker Studio Project

3. Price Competitiveness by Room Type

BigQuery

```
#3. Price Competitiveness by Room Type
SELECT
    room_type,
    ROUND(AVG(price),2) AS avg_price,
    COUNT(*) AS total_listings
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
    room_type
```

Press Alt+F1 fo

Query results SAVE RESULTS EXPLORE

JOB INFORMATION | RESULTS | CHART | JSON | EX

Row	room_type	avg_price	total_listings
1	Private room	87.38866110561…	7073
2	Entire home/apt	165.9782997349…	64884
3	Shared room	41.43749999999…	144

4. Host Performance Analysis

Advanced cal… RUN

```
#4. Host Performance Analysis
SELECT
  host_response_time,
  ROUND(AVG(review_scores_value),2) AS avg_review_score,
  COUNT(*) AS total_listings
FROM
  `inductive-seat-389220.Looker_Studio_Project.Airbnb`
GROUP BY
  host_response_time
```

Press Alt+F1 for

uery results SAVE RESULTS EXPLORE

JOB INFORMATION | RESULTS | CHART | JSON | EXE

	host_response_time	avg_review_score	total_listings
1	within an hour	4.68	30417
2	within a few hours	4.7	20623
3	within a day	4.69	17892
4	a few days or more	4.24	3169

Looker Studio Project

5. Testing out different chart types to effectively communicate your story.

   https://lookerstudio.google.com/reporting/3360069a-2508-4d60-b79a-a7ebe8d2d8c6