Internship Task Report – Looker Studio and Google Cloud Platform (GCP)

Date: 28-May-2025

Intern Name: Malleeswari D

Project: Data Analytics

Mentor: Sumankumarii

OBJECTIVE:

To understand and demonstrate the following:
1. Creating a custom field in Looker Studio for enhanced data visualization.
2. Merging social media and eCommerce datasets to build comprehensive charts.
3. Using Extended View in Google Cloud Platform to write SQL for a medical dataset.
4. Modifying BigQuery tables by adding new fields to support advanced analysis.

TASK 1: ADD A FIELD IN LOOKER STUDIO AND VISUALIZE THE CHANGES

Workflow:
1. Open Looker Studio and load the existing report.
2. Navigate to the connected data source.
3. Click on "Add a Field" to create a custom column.

Example:
Dataset with `Price` and `Quantity`. Create a field called `Tax`.

Formula:
Tax = Price * Quantity

4. Save the field and go back to the report.
5. Update your chart (e.g., Table) to include this new `Tax` field.
6. Analyze how the visualization changes with the addition of the new column.

Purpose: Helps derive new metrics and gain better insights without modifying the source data.

Sales Report

	Qty	Amount	Tax
6.	5	2175	10,875
7.	4	1316	5,264
8.	4	3036	12,144
9.	4	2860	11,440
10.	4	1740	6,960
11.	4	1504	6,016
12.	4	2796	11,184
13.	4	2664	10,656
14.	4	null	null
15.	4	2068	8,272
16.	3	1797	5,391
17.	3	1248	3,744
18.	3	1116	3,348
19.	3	2655	7,965
20.	3	2175	13,050
21.	3	1836	5,508

1 - 100 / 1493

TASK 2: USE EXTENDED VIEW IN GCP TO CREATE EXTENDED DATASET (MEDICAL)

Workflow:

1. Open Google Cloud Platform and go to BigQuery.
2. Use the SQL Workspace (extended view) to write a custom query on medical data.

Example SQL:

```
CREATE OR REPLACE VIEW `careful-synapse-461006-b5.medical.extended_medicalrecord`
AS

SELECT

  Age,

  CASE

    WHEN Gender = 1 THEN 'Male'

    WHEN Gender = 2 THEN 'Female'

    ELSE 'Unknown'
```

```
 END AS Gender_Label,


 `Heart rate`,
 `Systolic blood pressure`,
 `Diastolic blood pressure`,
 `Blood sugar`,
 `CK-MB`,
 `Troponin`,
 Result,


 -- Age Grouping
 CASE
   WHEN Age < 18 THEN 'Child'
   WHEN Age BETWEEN 18 AND 39 THEN 'Young Adult'
   WHEN Age BETWEEN 40 AND 59 THEN 'Middle Aged'
   WHEN Age >= 60 THEN 'Senior'
   ELSE 'Unknown'
 END AS Age_Group,
```

3. Run the query and connect the new table to Looker Studio.
Purpose: Supports risk analysis and categorization based on patient data.

TASK 3: ADD FIELD IN BIGQUERY TO MODIFY DATASET

Workflow:
1. In BigQuery, open the relevant table's schema.
2. Click "Edit Schema" > Add Column.
3. Alternatively, use SQL:

```
ALTER TABLE `project.dataset.sales`
```

ADD COLUMN shipping_cost FLOAT64;

4. Populate the new column if needed:
UPDATE `project.dataset.sales`
SET shipping_cost = amount * 0.1
WHERE shipping_cost IS NULL;

5. Refresh the data source in Looker Studio.
Purpose: Enables inclusion of new metrics to enhance analysis capabilities.

CONCLUSION:

This exercise provided hands-on experience with:
- Creating derived fields in Looker Studio.
- Merging datasets for integrated analysis.
- Writing SQL in BigQuery for advanced dataset creation.
- Modifying tables to evolve data structures.

Skills Demonstrated:
- Data Transformation
- SQL Query Writing
- Report Design in Looker Studio
- Understanding of Cloud Data Architecture