



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

1. Smartphone Sales Analytics Dashboard,
2. OTT Media Analytics Dashboard &
3. Formflow_SQL

The domain of the Project: SQL & POWERBI

NAME (and their designation): MS. KIMMI KUMARI (BCA , 2nd Year Pursuing)

1.

Period of the project

MAY 2025 to SEPTEMBER 2025



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Declaration

The project titled “**Smartphone Sales Analytics Dashboard**”, “**OTT Media Analytics Dashboard**” & “**Formflow_SQL**” has been mentored by Siddhika Shah, organized by SURE Trust, from May 2025 to September 2025. This project was developed individually for the benefit of gaining hands-on experience in working on industry-relevant projects that provide exposure to real-time data analysis, dashboard creation, SQL database integration and business intelligence insights.

I, **KIMMI KUMARI** declare that this project has been carried out successfully by myself, enhancing my practical knowledge in the domain of **SQL & Power BI**.

Name:

MS. Kimmi Kumari

BCA, 2nd Year (Pursuing)

Mentor's Name

Siddhika Shah
Software Engineer
HCL Tech

Organizer:

Prof. Radhakumari
Executive Director & Founder
SURE Trust

Table of contents

1. Executive summary
2. Introduction



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

3. Project Objectives
4. Methodology & Results
5. Social / Industry relevance of the project
6. Learning & Reflection
7. Future Scope & Conclusion

Table of contents

1. Project1: **Smartphone Sales Analytics Dashboard (POWER BI)**
2. Project2: **OTT Media Analytics Dashboard (POWER BI)**
3. Project3: **Formflow_SQL (SQL)**



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Project1: Smartphone Sales Analytics Dashboard (POWER BI)

Executive Summary

This project focuses on analyzing smartphone sales data using **Power BI** to uncover actionable business insights. The dataset contains transactional details, customer demographics, sales channels, and brand performance.

The **Power BI dashboard** highlights critical **Key Performance Indicators (KPIs)** such as:

- Unique Transactions
- Unique Products Sold
- Total Units Sold
- Total Revenue
- Average Price

Interactive visuals provide insights across **brands, regions, sales channels, payment types, and customer segments**. For example, Apple and Samsung dominate in sales volume, while Google and OnePlus contribute as niche premium players.

The findings are valuable for understanding sales performance, identifying customer preferences, and optimizing marketing strategies. This project demonstrates how business intelligence tools can transform raw data into meaningful insights.

Introduction

The **Smartphone industry** is highly competitive, with multiple brands competing across different countries and consumer segments. Businesses require data-driven insights to track sales performance, understand customer behavior, and plan better strategies.

This project was undertaken to analyze sales patterns, brand dominance, and revenue contribution using Power BI. The dashboard allows end-users to filter data by **month, brand, sales channel, or KPI**, making it dynamic and interactive.

Problem Statement:

Organizations often struggle to process large sales datasets and present insights in a clear, visual, and actionable way.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Scope:

- Focused on smartphone sales across countries such as **India, Turkey, and Bangladesh**.
- Covered different customer age groups and gender segments.
- Limited to the sales data provided in the Excel sheet for the given period.

Innovation Component:

The project emphasizes **interactive analytics** using slicers, drilldowns, and multiple perspectives (brand, geography, demographics, payment type) to create an industry-standard dashboard.



Project Objectives

- To design and develop an **interactive Power BI dashboard** for smartphone sales data.
- To measure and track **KPIs**: revenue, transactions, units sold, unique products sold, and average price.
- To analyze **brand performance** and identify strong, weak, and niche players.
- To study **regional sales performance** across different countries.
- To understand **customer demographics** (age, gender) and payment behavior.
- To provide a **decision-support tool** for sales and marketing teams



Methodology and Results

● **Methods/Technology used**

- Power BI Desktop
- DAX for calculated metrics and dynamic filtering
- Custom tooltips and bookmarks for interactivity



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Tools/Software used

- Power BI
- Excel (for raw data)
- Microsoft PowerPoint (for Background)
- Data collection approach

Sales data was aggregated across multiple months and segmented by brand, model, customer age group, gender, payment type, and geography.

Project Architecture



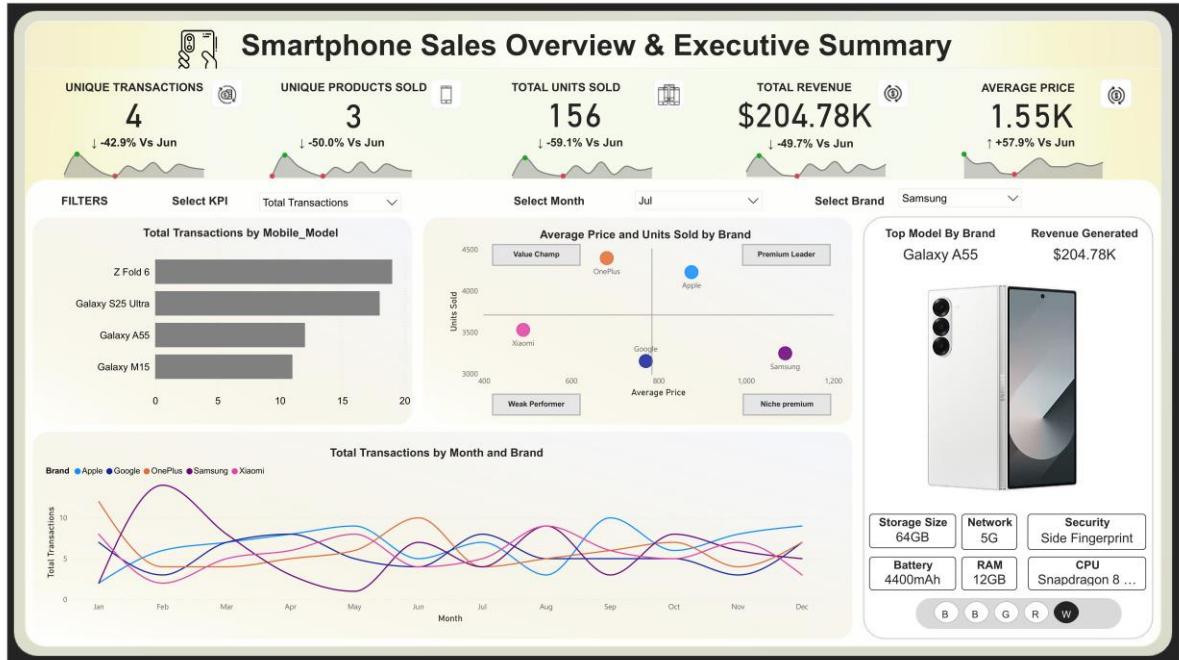
Final project working screenshots along with supporting explanation



Dashboard Page 1: Sales Overview

This page provides an **overall Sales Overview**:

- KPIs: Transactions, Products Sold, Units Sold, Total Revenue, and Average Price.
- Revenue by Age Group and Gender → Age group **42–49** generated the highest revenue.
- Regional Revenue → **India (\$0.91M)** leads, followed by **Turkey (\$0.42M)**.
- Payment Analysis → **Credit Card (32.8%)** and **Cash (28.8%)** are dominant.
- Sales Channels → **Online (67.8%)** contributes the majority of revenue.



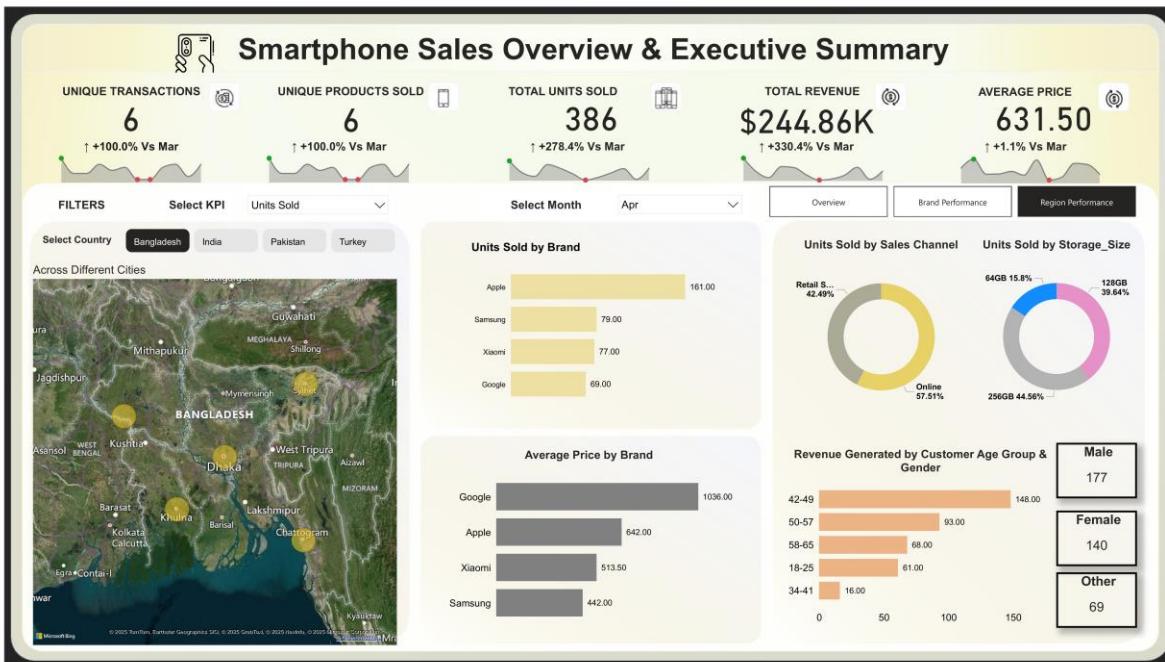
Dashboard Page 2: Brand Performance

This page focuses on **Brand Performance**:

- Transactions by Month and Brand.
- Top Model by Brand (e.g., **Samsung Galaxy A55**) with specifications.
- Average Price vs Units Sold comparison across brands.
- Classification of brands into:
 - Value Champ**
 - Weak Performer**
 - Premium Leader**
 - Niche Premium**



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)



Dashboard Page 3: Regional & Demographic Analysis

This page highlights **Regional and Demographic Analysis**:

- Units Sold by Brand and Sales Channel.
- Storage Size preferences (64GB, 128GB, 256GB).
- Average Price comparison across Apple, Samsung, Xiaomi, and Google.
- Customer segmentation by Age Group and Gender.
- Regional sales map for **India, Turkey, Bangladesh, and Pakistan**.

Project GitHub Link: https://github.com/KimmiKumari07/sql_powerbi-PROJECT-SURE_PROED

Social / Industry Relevance of the Project

The smartphone market is one of the fastest-growing industries, directly influencing communication, digital adoption, and the economy. Projects like this have **social and industry relevance** because:

- Businesses can use dashboards for **sales forecasting and inventory planning**.
- Helps organizations in **identifying customer trends and regional demand**.
- Students and professionals gain **hands-on learning** in analytics tools that are in high demand.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

- Encourages **data-driven decision-making** in small and medium-scale businesses, especially in emerging markets.
-

Learning and Reflection

- This project was a **transformative learning experience**, enhancing both technical and analytical skills:
- **Technical Learnings:**
 - Mastery of **Power BI** for dashboard design.
 - Data cleaning and shaping with **Power Query**.
 - Writing **DAX formulas** for KPIs.
 - Building interactive slicers and filters.
- **Analytical Learnings:**
 - Understanding sales KPIs and their real-world importance.
 - Identifying sales patterns across brands, channels, and demographics.
 - Improving skills in **storytelling with data**.
- **Overall Reflection:**
 - This project boosted confidence in handling end-to-end analytics workflows.
 - It demonstrated the importance of presenting data in a visual and interactive manner.



Conclusion and Future Scope

The **Smartphone Sales Analytics Project** successfully delivered an interactive dashboard that highlights KPIs, brand performance, and customer insights. It showcased the power of **business intelligence tools** in transforming raw data into actionable strategies.

Future Scope:

- Integrating **real-time sales data** from online platforms.
- Using **machine learning models** to predict future sales trends.
- Expanding to include **global datasets** for comparative analysis.
- Creating **mobile-friendly dashboards** for quick decision-making.

This project demonstrates how analytics can drive better decisions in highly competitive industries like smartphones, making it both practically valuable and academically enriching.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Project2: OTT Media Analytics Dashboard (POWER BI)

Executive Summary

The **OTT Media Analytics Dashboard** project aims to analyze **viewer behavior, content consumption patterns, and platform performance** across different demographics. Using **Power BI**, an interactive dashboard was created to display **KPIs, watch time trends, genre preferences, ratings, and top-performing shows**.

This analysis provides insights into:

- Viewer demographics by **age and gender**.
- **Watch time patterns** over time.
- **Genre popularity** across the audience base.
- Performance of **top shows and platforms**.
- **Detailed data table** for deeper exploration.

The dashboard enables media platforms to better understand **user engagement**, optimize **content strategy**, and improve **viewer retention**

Introduction

With the exponential growth of **OTT platforms** (Netflix, Amazon Prime, Disney+, HBO Max, etc.), content consumption has become more fragmented and competitive. Platforms need **data-driven insights** to identify user preferences, track engagement, and optimize recommendations.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

This project leverages **Power BI** to analyze OTT data, focusing on **ratings, watch time, demographics, and genre preferences**.

Problem Statement:

OTT platforms collect massive amounts of viewing data, but without effective visualization, it is difficult to extract actionable insights for business decisions.

Scope:

- Focus on **user demographics (age, gender)**.
- Analysis of **genres (Action, Comedy, Drama, Romance, Sci-Fi, Thriller)**.
- Identification of **top shows and platforms**.
- Evaluation of **watch time trends vs. target watch time**.

Innovation Component:

An **interactive dashboard** was built with **filters for platform, genre, and gender**, making the analytics adaptable to different user queries.

Project Objectives

- To design a **Power BI dashboard** for OTT media consumption.
- To track **KPIs: watch time, ratings, active users, genre popularity**.
- To analyze **viewer demographics** and preferences.
- To identify **top-performing shows and platforms**.
- To compare **watch time trends** with target watch time.
- To provide **strategic insights** for OTT platforms.

Methodology and Results

Methodology

1. Data Collection & Preparation:

- a. Dataset includes **users, genres, platforms, ratings, and watch time hours**.
- b. Data was cleaned and structured in **Power Query**.

2. Data Transformation:

- a. Relationships established between **users, platforms, genres, and shows**.
- b. DAX calculations for **KPIs** (sum of watch time, average ratings, user counts).

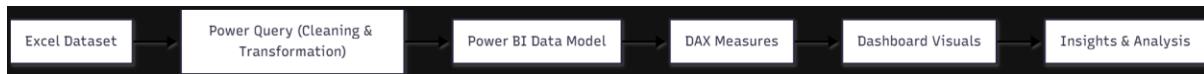
3. Dashboard Development:



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

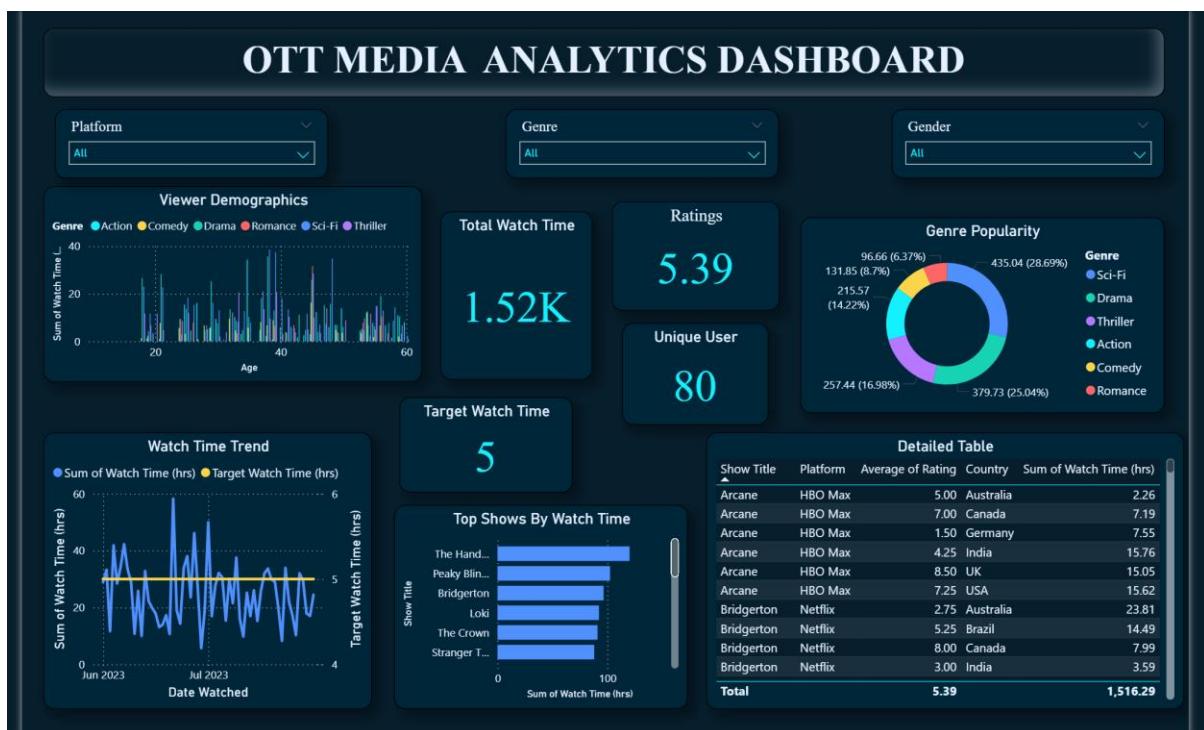
- KPIs designed using **cards** (watch time, ratings, users).
- Charts for **demographics, watch trends, genre popularity, and top shows**.
- Filters for **platform, genre, and gender**

Project Architecture



Results

Final project working screenshots along with supporting explanation



Explanation:

1. Viewer Demographics:

- Watch time segmented by **age and genre**.
- Younger audiences prefer **Action, Sci-Fi, and Thriller**, while older groups lean towards **Drama and Romance**.

2. Key KPIs:

- Sum of Watch Time:** 1.52K hours.
- Average Rating:** 5.39.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

- c. **Unique Users:** 80.
- d. **Target Watch Time:** 5 hours.

3. Genre Popularity:

- a. Top genres: **Sci-Fi (28.6%), Comedy (25.0%), Drama (17.0%).**
- b. Niche genres like **Thriller and Action** hold smaller but significant shares.

4. Watch Time Trend:

- a. Spikes observed in **June–July 2023**, indicating seasonal engagement.
- b. Target watch time was **mostly consistent** with actual watch time.

5. Top Shows by Watch Time:

- a. **The Handmaid's Tale, Peaky Blinders, Bridgerton, Loki, The Crown, Stranger Things** dominate.

6. Detailed Table:

- a. Provides granular data (title, platform, country, average rating, total watch time).
- b. Helps track **regional and platform-specific performance**.

Project GitHub Link: https://github.com/KimmiKumari07/sql_powerbi-PROJECT-SURE_PROED

Social / Industry Relevance of the Project

The OTT industry is one of the fastest-growing sectors globally. This project has **high industry relevance** because:

- Enables platforms to **understand audience behavior**.
- Helps in **content recommendation and personalization**.
- Provides insights into **genre preferences** across demographics.
- Supports **data-driven decision-making** in marketing and production.



Technical Learning:

- Building KPIs in Power BI.
- Using Power Query for data cleaning.
- Writing DAX measures.
- Designing interactive dashboards.

Analytical Learning:

- Interpreting watch time trends.
- Understanding demographic influences on OTT viewership.
- Mapping **genre popularity vs. ratings**.

Reflection:

- Gained confidence in handling end-to-end dashboard projects.
- Improved storytelling with data visualization.

Conclusion and Future Scope

The **OTT Media Analytics Dashboard** successfully highlights **watch time, user demographics, ratings, and genre preferences**. It demonstrates the power of **Power BI** in OTT data analysis and supports platforms in enhancing **viewer engagement strategies**.

Future Scope:

- Integration with **real-time streaming data**.
- Predictive analytics for **viewership forecasting**.
- Recommendation engine based on **genre & user history**.
- Expansion to include **social media sentiment analysis** for shows.



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

Project3: Formflow_SQL (SQL)

Executive Summary

This project automates the process of **collecting form responses from Google Sheets** and inserting them into a **MySQL database**. Using Python and the Google Sheets API, the system connects to a sheet titled “*Data Form*”, retrieves all records, and writes them into a structured MySQL table (*responses*).



Innovation & Entrepreneurship Hub for Educated Rural Youth (SURE Trust – IERY)

The solution helps overcome challenges of manual data entry and ensures data consistency, scalability, and centralized access.

Introduction

Many organizations use **Google Forms + Google Sheets** to collect data, but struggle to integrate it with relational databases for analysis and reporting.

This project bridges that gap by:

- Connecting Google Sheets with a MySQL backend.
- Automating insertion of form responses into a structured table.
- Ensuring duplicate entries are skipped via a **unique timestamp key**.

Problem Statement:

Manually transferring form data from Google Sheets to SQL databases is time-consuming and error-prone.

Scope:

- Collects **form responses** (Full Name, Email, Phone, Course, Feedback, Timestamp).
- Supports integration with **MySQL running in XAMPP**.
- Uses **Python automation** to run at regular intervals.

Innovation Component:

The project is designed to run automatically and can be scheduled with **cron jobs (Linux)** or **Task Scheduler (Windows)** for periodic updates.



Project Objectives

- Automate data flow from **Google Sheets** → **MySQL database**.
- Reduce **manual effort** and errors in form data entry.
- Ensure **data integrity** using primary keys and uniqueness constraints.
- Provide a scalable architecture for integrating other forms in the future.
- Build skills in **Python scripting, SQL, and API integration**.

Methodology and Results

Methodology

1. Database Setup:

- a. Created formflow_db database with responses table using **schema.sql**
- b. Fields: id, full_name, email, phone, course, feedback, timestamp.

2. Python Scripting:

- a. Used gspread and oauth2client to authenticate with Google Sheets
- b. Used mysql-connector-python to connect with MySQL.

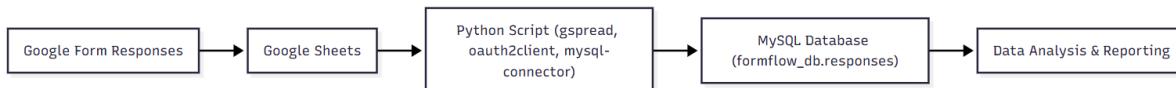
3. Data Insertion Logic:

- a. Loop through each row in Google Sheets.
- b. Format the timestamp.
- c. Insert into MySQL (skip duplicates).

4. Configuration Files:

- a. config.py stores MySQL credentials
- b. credentials.json stores Google API credentials
- c. requirements.txt ensures dependencies are installed

Project Architecture



Results

- When executed, the script fetches records from Google Sheets and inserts them into MySQL.
- Duplicate rows are automatically skipped (checked via timestamp).
- Logs show successful insertions, e.g.:

- ✓ Inserted: Ayush Kumar
➡ Skipped duplicate: Anjali Kumari

- Database after execution contains structured responses, ready for analytics.

| | 1 | Akash Kumar | akash5678@gmail.com | 321654875 | Btech | nice |
|--|----|----------------------|-----------------------------------|-------------|-------|-------------------|
| | 2 | Priya Kumar | priyav987@gmail.com | 5647891235 | Mtech | |
| | 3 | Gopika N G | gopkangot18sandipwari@gmail.com | 8590154601 | Btech | Good |
| | 4 | Sudha Prasad | sudha5070@gmail.com | 2113300213 | Btech | good |
| | 5 | Aradhana Kumar | aradhana956@gmail.com | 8995214745 | Bsc | nice |
| | 6 | Kimmi Kumar | kimmikumari18sq powerbi@gmail.com | 3652147856 | BCA | good |
| | 7 | Dnyanesh Gupta | dnyaneshkumar@gmail.com | 6299181517 | Btech | Its a good course |
| | 8 | Shivam sharma | sergo0319211@gmail.com | 9835145079 | Bsc | |
| | 9 | Shivam dubey | hulkmmkr@gmail.com | 7903220487 | msc | |
| | 10 | Gourav kumar | gourawkm2004@gmail.com | 9007404666 | Btech | Nice course |
| | 11 | Aryan kumar | 024220309@neiges.edu.in | 7903639607 | Btech | Its a good course |
| | 12 | Ayush kumar | Ayush173@gmail.com | 638474830 | BCA | Good |
| | 13 | Anjali Kumari | anjali64@gmail.com | 9874561233 | msc | nice course |
| | 14 | Supriya Kumar | Supriya09@gmail.com | 5678912345 | Mtech | Good |
| | 15 | Ashwin Singh | AshwinSingh2324@gmail.com | 887689070 | Btech | Nice |
| | 16 | Harsh yadav | Harsh3496@gmail.com | 9886988897 | Bsc | |
| | 17 | Vishal verma | Vishalver95@gmail.com | 9866980656 | msc | Nice |
| | 18 | Gourav Kumar | Gourav2345@gmail.com | 9787968797 | Btech | Good course |
| | 19 | Karan kumar | Karankar237@gmail.com | 9690688080 | msc | |
| | 20 | Harsht rai | Harshtrai564@gmail.com | 9769069966 | Bsc | Completed |
| | 21 | Shambhu pratap singh | Shambhu9345@gmail.com | 9796968956 | msc | Excellent course |
| | 22 | Shivam iyer | sergo0319211@gmail.com | 6299181569 | Btech | |
| | 23 | Rohit kumar | Rohitk975@gmail.com | 9866758858 | Btech | Good |
| | 24 | Ayan singhania | cheemsd09123@gmail.com | 62789600970 | Btech | |
| | 25 | Varsha kumar | Varshaw875@gmail.com | 9866996055 | Mtech | Nice |
| | 26 | Sheetal gangwar | cheemsd09123@gmail.com | 6789009670 | BCA | |
| | 27 | Chaitanya singh | hulkmmkr@gmail.com | 9887900458 | Btech | |
| | 28 | Iqbal kadir | cheemsd09123@gmail.com | 8900785479 | Bsc | |
| | 29 | Hussan akhtar | cheemsd09123@gmail.com | 9078967450 | BCA | Good course |
| | 30 | Adarsh singh | cheemsd09123@gmail.com | 9860756980 | Btech | |
| | 31 | Supal borkeda | cheemsd09123@gmail.com | 987469930 | BCA | |
| | 32 | Harsh agarwal | hulkmmkr@gmail.com | 7890575698 | BCA | |

Project GitHub Link: https://github.com/KimmiKumari07/sql_powerbi-PROJECT-SURE_PROED



Social / Industry Relevance of the Project

This project has real-world applicability in **education, training institutes, NGOs, and businesses** that rely on Google Forms for data collection.

- Eliminates manual data transfer.
- Ensures **faster availability of structured data**.
- Can be extended to other systems like **Power BI dashboards or ERP tools**.

Learning and Reflection

Technical Learning:

- Google Sheets API (gspread + oauth2client).
- MySQL database design.
- Python automation scripting.

Analytical Learning:

- Importance of data integrity & constraints.
- Automating repetitive workflows.

Reflection:

- Project demonstrated how simple scripts can replace hours of manual work.
- Improved skills in **data engineering fundamentals**.



Conclusion and Future Scope

This project successfully automated the insertion of Google Form responses into a MySQL database, ensuring accuracy, efficiency, and scalability.

Future Scope:

- Add **real-time sync** instead of batch execution.
- Integrate with **Power BI** for live reporting dashboards.
- Add **error logging** and **email notifications** for failed runs.
- Extend for **multi-form support** with dynamic schema mapping.