
# Basic Data Visualization using Looker Data Studio

Teerapong Panboonyuen

https://github.com/kaopanboonyuen/LookerStudio101

# Course Instructor:


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# References and Disclaimer



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- https://cloud.google.com/looker-studio
- https://marketingplatform.google.com/about/analytics/
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## Disclaimer:

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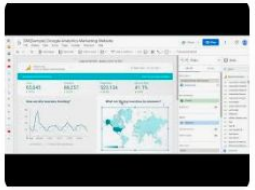
YouTube
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Best Looker Studio Marketi…


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Reddit
Looker Studio Dashboard Templates…


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YouTube

1 Oct 2024 - 30 Oct 2024

Connectors list

Template gallery

About metrics used

catchr

# Overview

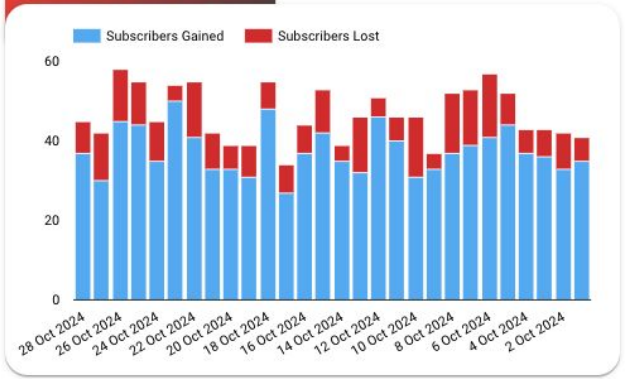
**Channel :** Catchr

## Channel informations

| Channel Views | Subscribers | Channel Videos |
|---|---|---|
| 14.2M | 76.4K | 243 |

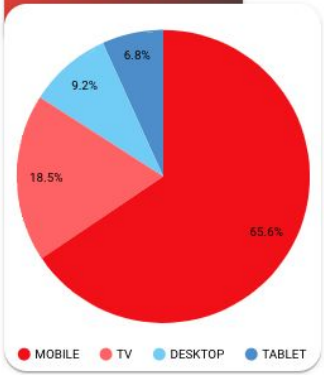
## Video performances

| Views | Likes | Comments | Shares | Average View % |
|---|---|---|---|---|
| 9.8M | 64.8K | 106.0 | 4.4K | 64.8 |




## Subsciber gained and lost

## Views by Device



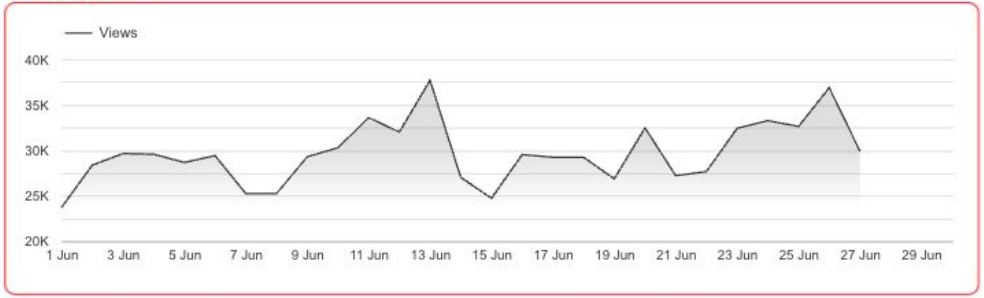
YouTube

Channel Title

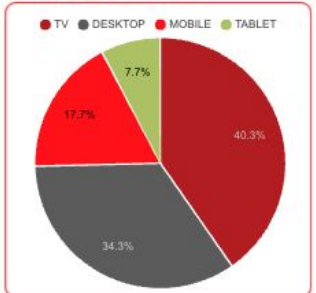
1 Jun 2025 - 30 Jun 2025

| Subscribers | Channel View | Views | Likes | Shares | Minutes watched |
|---|---|---|---|---|---|
| 413K | 83.6M | 801.7K | 8.0K | 2.4K | 32.6M |
| | | ▼ -14.3% | ▼ -4.5% | ▼ -44.6% | ▼ -14.4% |

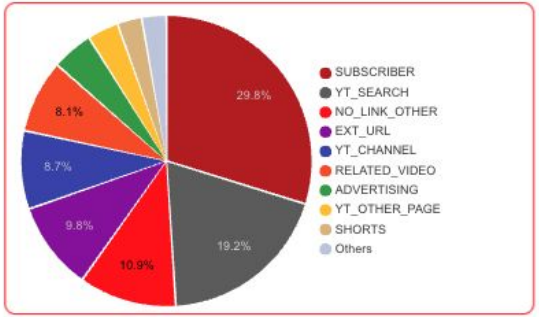
## Views over time




## Device Type by Views




## Insight Traffic Source Type by Views




## Subscribers gained & lost over time

porter

Main metrics of your channel

The performance of your videos

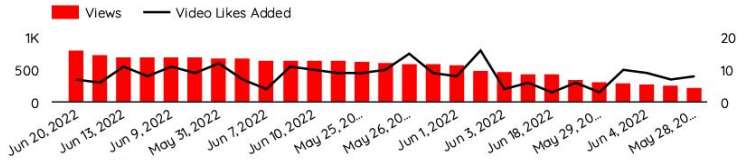
User reactions

# YouTube Report

Select date range

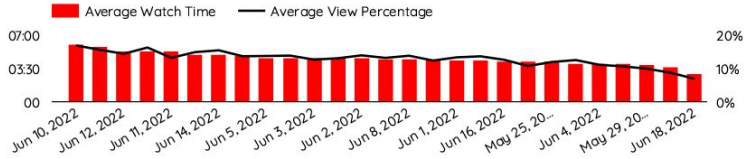
**How many video views your content got received in a month?**

Views
14,931
0.5%



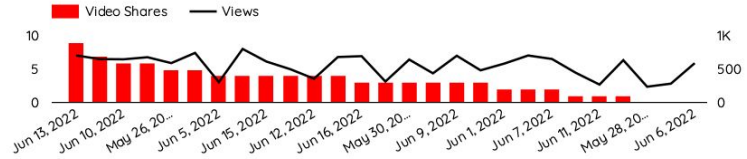

**How users are consuming your YouTube videos?**

Average Watch Time
00:04:35
-10.7%



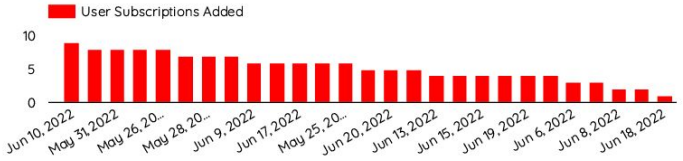

**Is your content being shared?**

Video Shares
89
-28.8%




**How is your subscription behavior in a month?**

User Subscriptions Added
142
-26.0%



| Type | Rating | Release year |
|---|---|---|
| Movie | TV-14 | 2018 |
| **Title** | **Duration** | **Date added** |
| 2,215 | 89 min | 2019 |

# NETFLIX

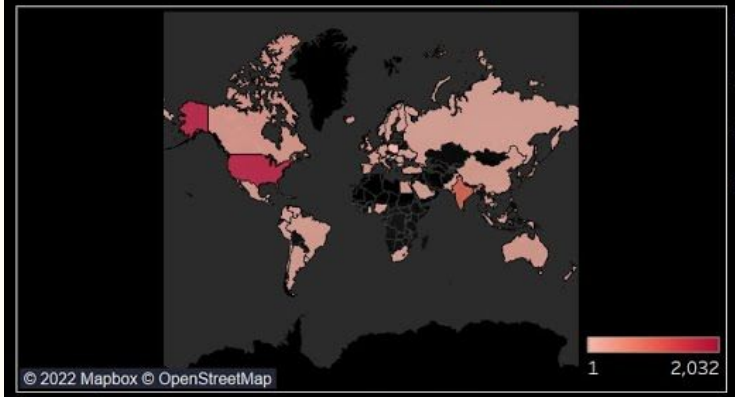
## Genre

Documentaries, International Movies, Sports Movies

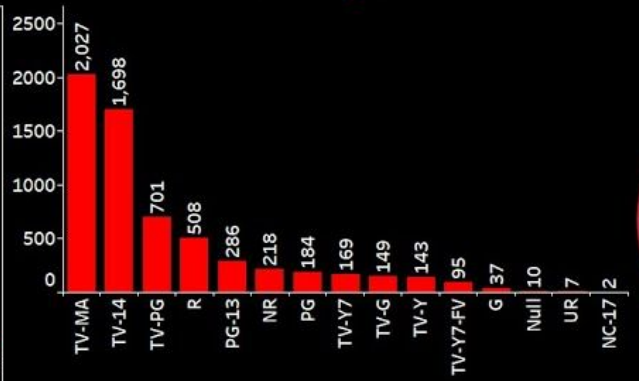
## Description

This intimate documentary follows rock star Artiwara Kongmalai on his historic, 2,215-kilometer charity run across Thailand in 2017.

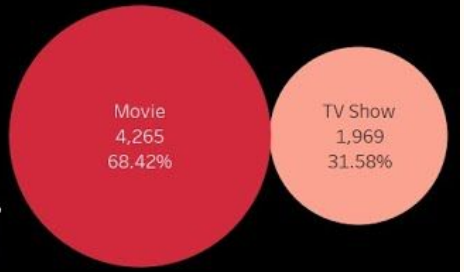
## Total movies & TV shows by country



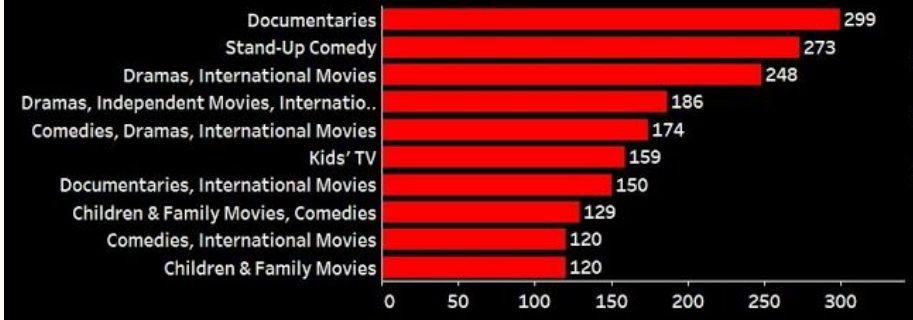

## Ratings



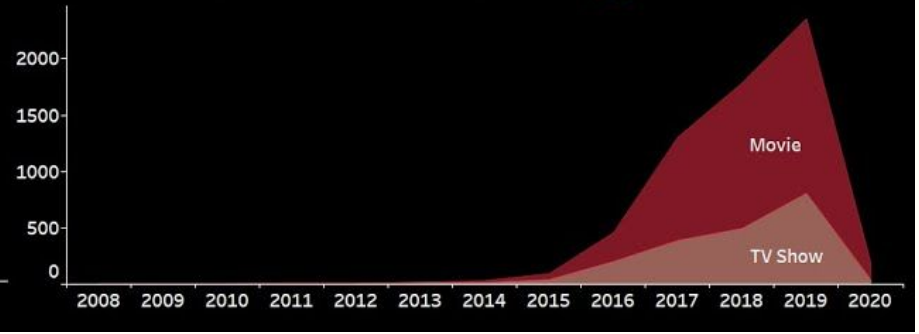

## Movies & TV shows distribution




## Top 10 genre




## Total movies & TV shows by years



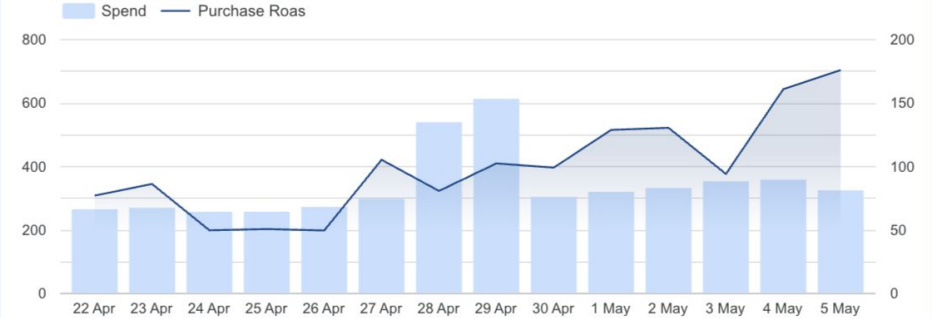
# Meta | Campaign results

Account Name

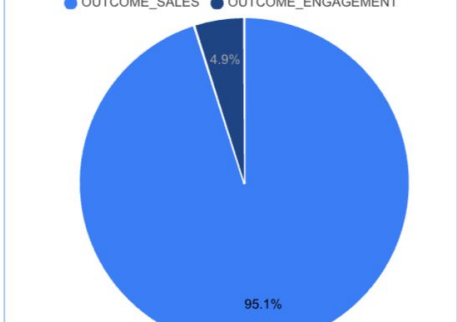
22 Apr 2025 - 5 May 2025

| Spend | Revenue | ROAS | Impressions | CPM | Clicks | CPC |
|---|---|---|---|---|---|---|
| 4.7K | 151.6K | 99.4 | 2.6M | 6.1 | 60.4K | 0.3 |
| ↑ 31.2% | ↑ 25.2% | ↑ 32.6% | ↑ 16.7% | ↑ 1.5% | ↑ 12.9% | ↓ -4.4% |

## Spend and Purchase Roas over time




## Campaign Objective by Spend




## RESULT BY CAMPAIGN NAME

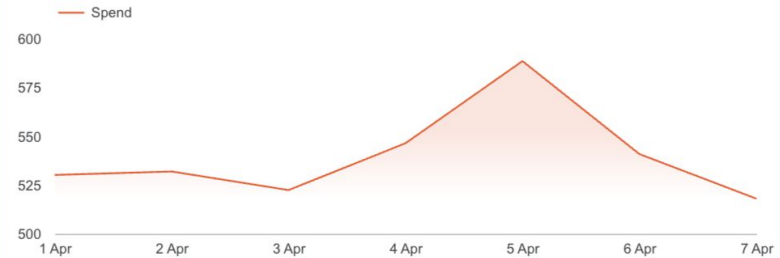
| Campaign Name | Spend | Purchases Values | Purchase Roas | Impressions | CPM | Clicks | CTR | CPC | Purchases |
|---|---|---|---|---|---|---|---|---|---|
| Campaign n°1 | 1.7K | 1.7K | 1 | 377,055 | 4.39 | 12,412 | 3.29% | 0.13 | 18 |
| Campaign n°2 | 1.3K | 55.4K | 43.9 | 787,316 | 1.6 | 15,530 | 1.97% | 0.08 | 639 |
| Campaign n°3 | 349.3 | 12.7K | 36.4 | 242,307 | 1.44 | 4,148 | 1.71% | 0.08 | 85 |

# Reddit Ads ❖ Overview

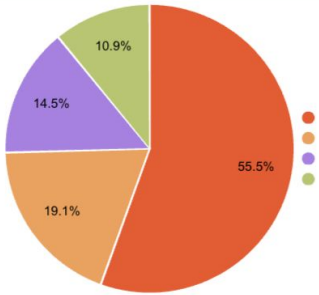
1 Apr 2025 - 7 Apr 2025

| Spend | Impressions | ECPM | Reach | Clicks | CPC |
|---|---|---|---|---|---|
| 3.8K | 2.2M | 3.5 | 1.1M | 6K | 1.2 |
| ↑ 1.5% | ↑ 47.2% | ↓ -33.1% | ↑ 32.9% | ↑ 30.8% | ↓ -22.0% |

## Spend over time




## Campaign Name by Spend




## Campaign Performances

| Campaign Name | Spend | % Δ | Impressions | % Δ | Clicks | % Δ | ECPM | % Δ | CPC | % Δ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2,096.44 | -1.1% ↓ | 1,024,288 | 61.0% ↑ | 3,384 | 35.0% ↑ | 2.05 | -38.6% ↓ | 0.62 | -26.8% ↓ |
| | 721.31 | -1.4% ↓ | 442,315 | 38.8% ↑ | 982 | 31.3% ↑ | 1.63 | -29.0% ↓ | 0.73 | -24.9% ↓ |
| | 547.97 | 7.3% ↑ | 431,505 | 42.1% ↑ | 946 | 20.8% ↑ | 1.27 | -24.4% ↓ | 0.58 | -11.2% ↓ |
| | 412.54 | 14.4% ↑ | 287,631 | 27.2% ↑ | 743 | 25.3% ↑ | 1.43 | -10.1% ↓ | 0.56 | -8.7% ↓ |
| **Grand total** | **3,778.26** | **1.5% ↑** | **2,185,739** | **47.2% ↑** | **6,055** | **30.8% ↑** | **3.49** | **-33.1% ↓** | **1.25** | **-22.0% ↓** |

1 - 4 / 4

[Example] Google Ads Overview Report

File Edit View Insert Page Arrange Resource Help

Add page | Add data | Add a chart | Add a control | Theme and layout


COUPLER.IO
TikTok Organic
Get this dashboard for free
Book a Demo
Total time watched (seconds)
1.5M
Videos
75
Total Duration of Video (sec)
2.1K
Followers
5K
Profile views
2K
Views
42,981
Likes
7,637
Likes rate
17.77
Shares
398
Shares rate
2.23
Comments
959
Comments rate
0.93
Timeline insights
Likes
New followers
Videos
Apr 15, 2024 to Apr 21, 2024 (Week 16)
Apr 22, 2024 to Apr 28, 2024 (Week 17)
Apr 29, 2024 to May 5, 2024 (Week 18)
May 6, 2024 to May 12, 2024 (Week 19)
May 13, 2024 to May 19, 2024 (Week 20)
May 20, 2024 to May 26, 2024 (Wee...
Your most active days
*days of the week when you publish your videos
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Top Countries by views
Country
Percentage view by Country
United States of America
Estonia
Ukraine
United Kingdom
Netherlands
Audience composition by gender
47.3%
42.7%
10%
Female
Male
Other

# INVENTORY DASHBOARD TEMPLATE

Visual tool summarizing real-time inventory data for effective management and analysis.

Google
Data Studio

Looker

# Why Use Looker Studio?

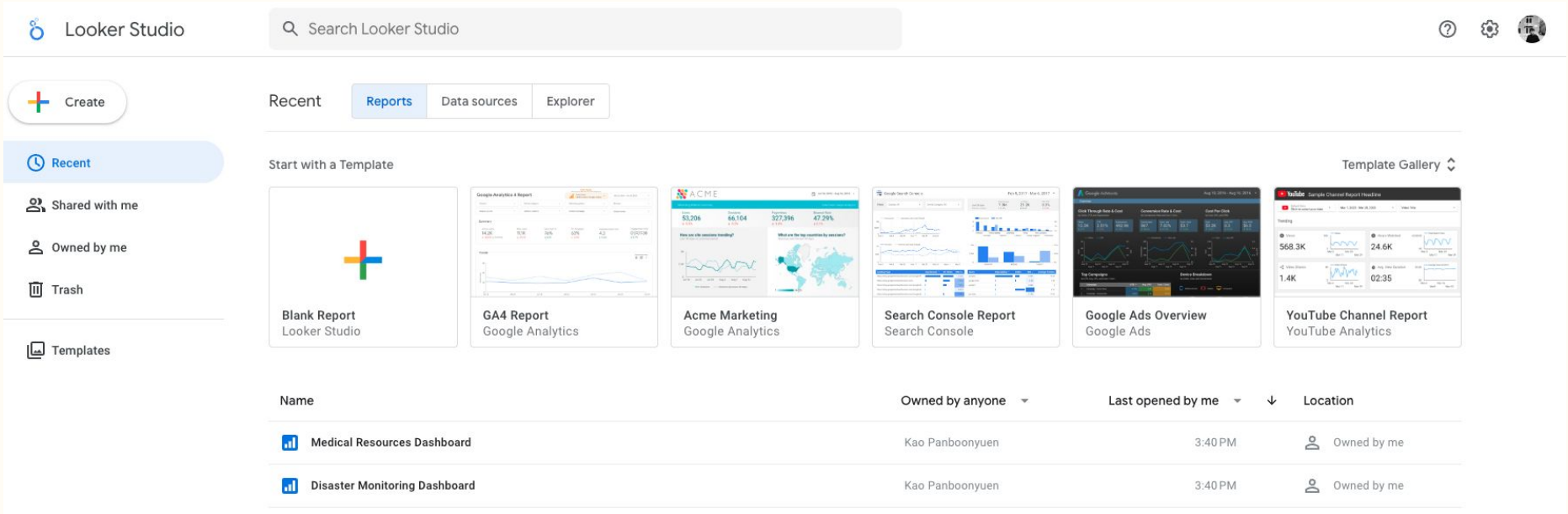
- **User-Friendly Interface:** Intuitive drag-and-drop design.
- **Seamless Integration:** Directly integrates with Google products and other third-party data sources.
- **Interactive Dashboards:** Create real-time, dynamic reports.
- **Customization Options:** Control the look and feel of your reports with tons of customization options.
- **Collaboration:** Easily share reports with colleagues, clients, and stakeholders.

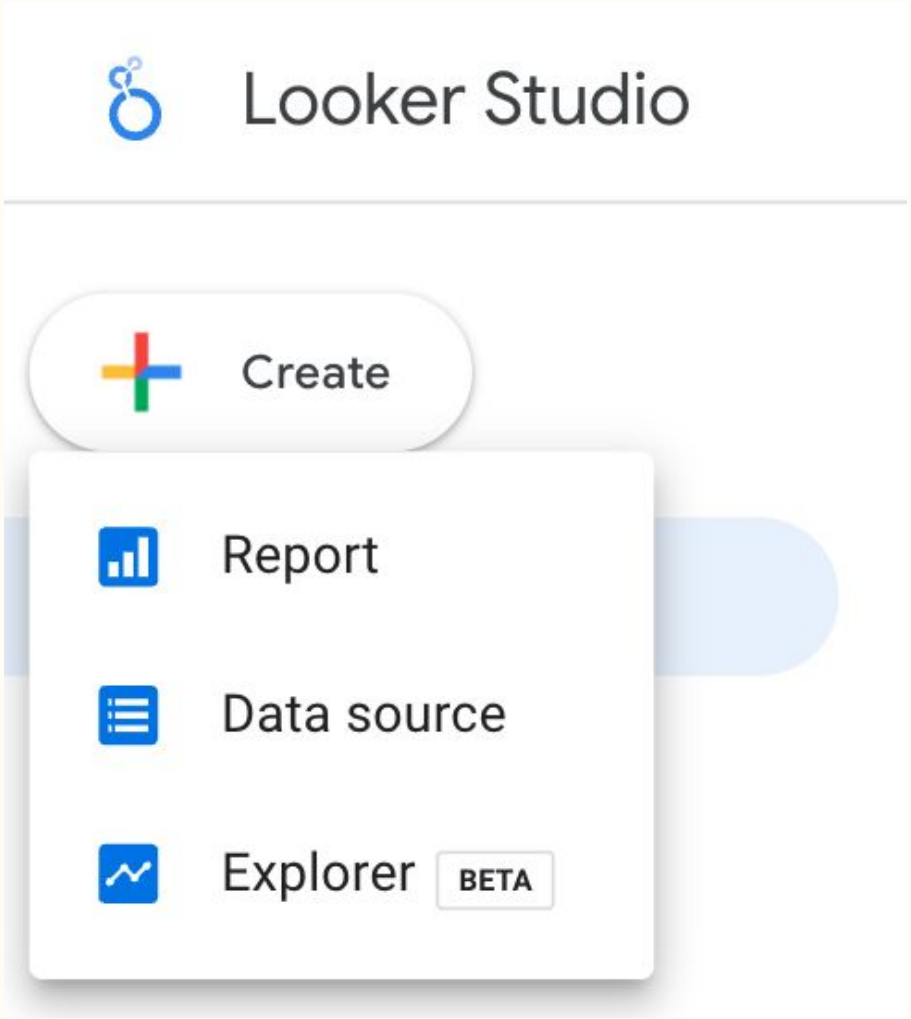
# Key Features of Looker Studio

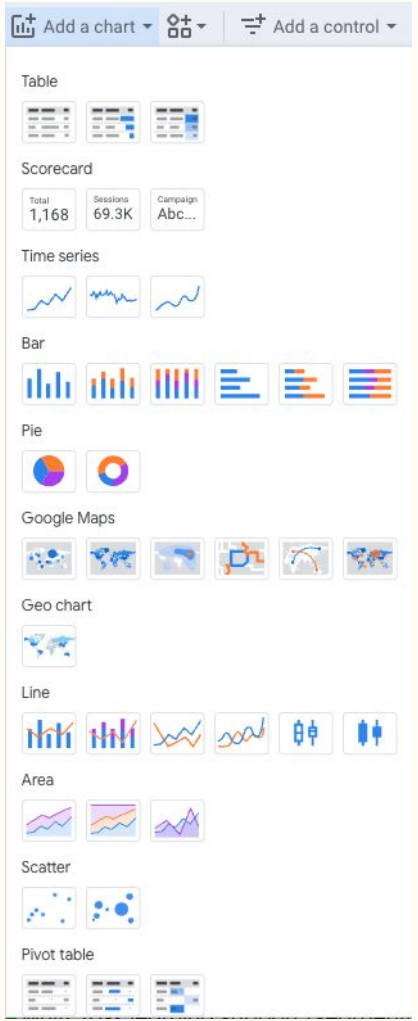
- **Data Sources:** Connect to over 150 data connectors (Google Analytics, Google Sheets, MySQL, etc.).
- **Data Blending:** Combine multiple data sources into one report.
- **Calculated Fields:** Create custom metrics and dimensions on the fly.
- **Data Controls:** Allow users to filter data within your reports (date range, location, etc.).
- **Customizable Visuals:** Use charts, graphs, tables, and geo-maps to represent your data.

# Getting Started with Looker Studio

1. **Create an Account:** Sign up for a free Looker Studio account with your Google account.
2. **Create a New Report:**
   - Go to Looker Studio https://lookerstudio.google.com/
   - Click on “Create” > “Report.”
3. **Add Data Sources:**
   - Click on the **Data** icon.
   - Select a data source from your Google Drive or use an external connector.


Looker Studio
Search Looker Studio
Create
Recent
Shared with me
Owned by me
Trash
Templates
Recent
Reports
Data sources
Explorer
Start with a Template
Template Gallery
Blank Report
Looker Studio
GA4 Report
Google Analytics
Acme Marketing
Google Analytics
Search Console Report
Search Console
Google Ads Overview
Google Ads
YouTube Channel Report
YouTube Analytics
Name
Owned by anyone
Last opened by me
Location
Medical Resources Dashboard
Kao Panboonyuen
3:40 PM
Owned by me
Disaster Monitoring Dashboard
Kao Panboonyuen
3:40 PM
Owned by me


Looker Studio
Create
Report
Data source
Explorer
BETA


Add a chart
Add a control
Table
Scorecard
Total
1,168
Sessions
69.3K
Campaign
Abc...
Time series
Bar
Pie
Google Maps
Geo chart
Line
Area
Scatter
Pivot table

Looker Studio

Search Looker Studio

Create

Recent

Shared with me

Owned by me

Trash

Templates

## Template Gallery

Category

### Google Analytics

GA4 Report
By Looker Studio Team
Google Analytics

Acme Marketing
By Looker Studio Team
Google Analytics


Ecommerce PPC
By Looker Studio Team
Google Analytics + Go...


Google Account CPA / ROAS To
By Looker Studio Team
Google Analytics ...

Google Merchandise Store
By Looker Studio Team
Google Analytics

Google Analytics Behaviors Ove
By Looker Studio Team
Google Analytics

### BigQuery

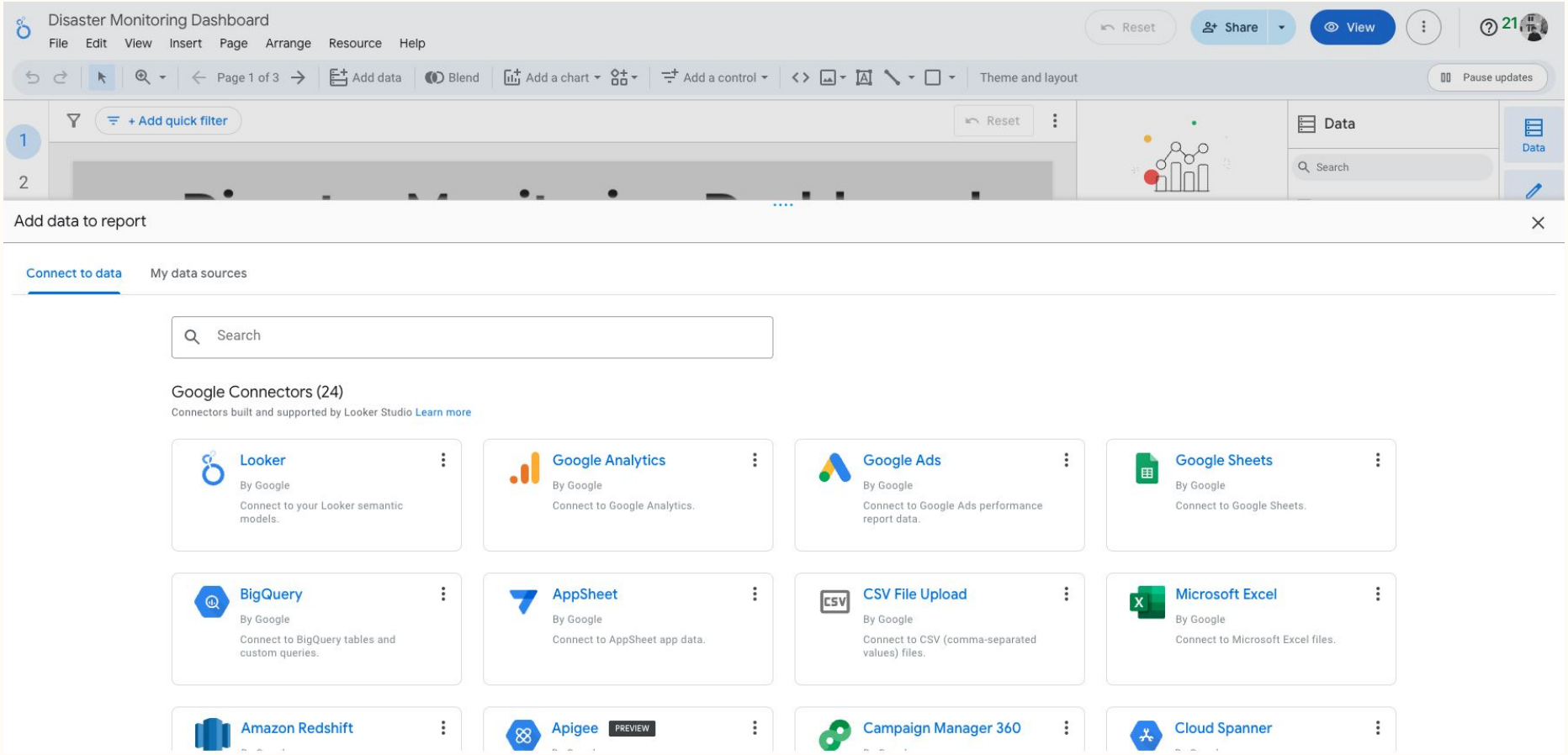
Firebase Events Report
By Looker Studio Team
Google BigQuery

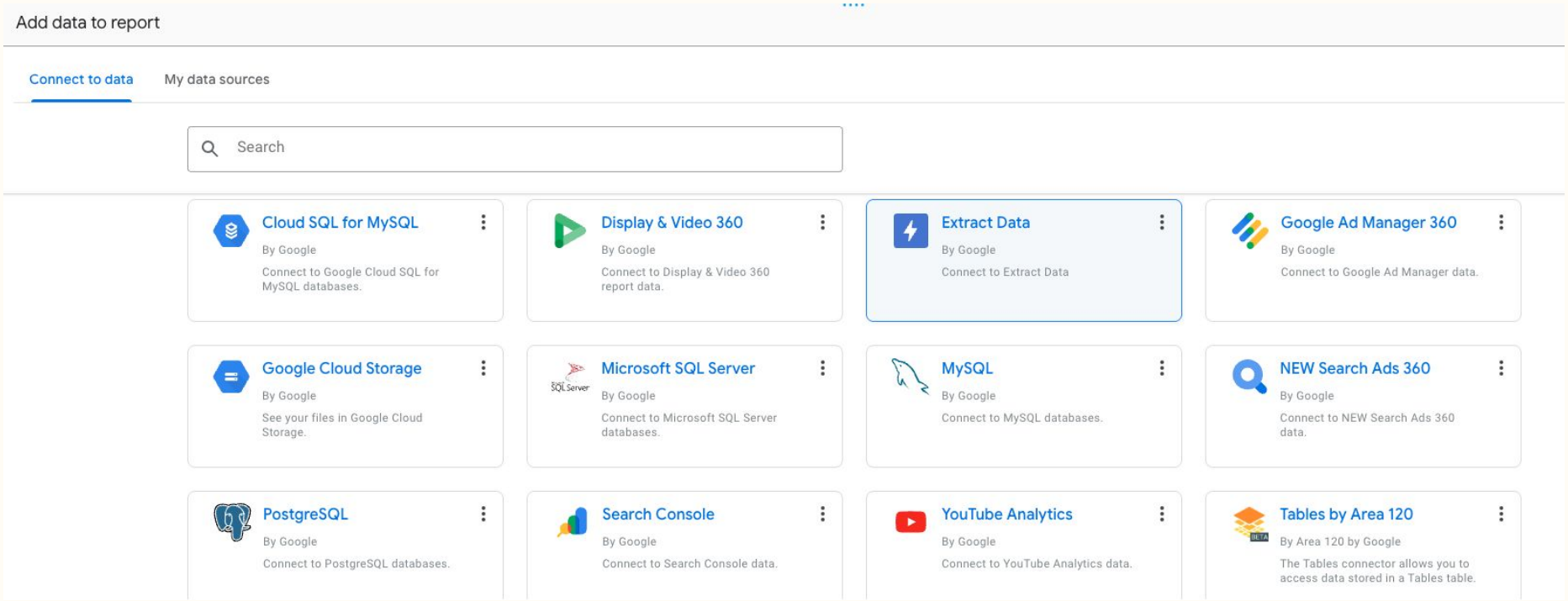
Crashlytics Dashboard
By Looker Studio Team
Google BigQuery


Meet Recordings Insights
By Looker Studio Team
Big Query

Google Classroom Engagement
By Looker Studio Team
Big Query


Google Cloud Workload Manag
By Looker Studio Team
Big Query


Disaster Monitoring Dashboard
File Edit View Insert Page Arrange Resource Help
Reset
Share
View
Page 1 of 3
Add data
Blend
Add a chart
Add a control
Theme and layout
Pause updates
+ Add quick filter
Reset
Data
Search
Add data to report
Connect to data
My data sources
Search
Google Connectors (24)
Connectors built and supported by Looker Studio Learn more
Looker
By Google
Connect to your Looker semantic models.
Google Analytics
By Google
Connect to Google Analytics.
Google Ads
By Google
Connect to Google Ads performance report data.
Google Sheets
By Google
Connect to Google Sheets.
BigQuery
By Google
Connect to BigQuery tables and custom queries.
AppSheet
By Google
Connect to AppSheet app data.
CSV File Upload
By Google
Connect to CSV (comma-separated values) files.
Microsoft Excel
By Google
Connect to Microsoft Excel files.
Amazon Redshift
Apigee
PREVIEW
Campaign Manager 360
Cloud Spanner


Add data to report
Connect to data
My data sources
Search
Cloud SQL for MySQL
By Google
Connect to Google Cloud SQL for MySQL databases.
Display & Video 360
By Google
Connect to Display & Video 360 report data.
Extract Data
By Google
Connect to Extract Data
Google Ad Manager 360
By Google
Connect to Google Ad Manager data.
Google Cloud Storage
By Google
See your files in Google Cloud Storage.
Microsoft SQL Server
By Google
Connect to Microsoft SQL Server databases.
MySQL
By Google
Connect to MySQL databases.
NEW Search Ads 360
By Google
Connect to NEW Search Ads 360 data.
PostgreSQL
By Google
Connect to PostgreSQL databases.
Search Console
By Google
Connect to Search Console data.
YouTube Analytics
By Google
Connect to YouTube Analytics data.
Tables by Area 120
By Area 120 by Google
The Tables connector allows you to access data stored in a Tables table.

# Connecting Your Data

1. **Google Sheets:**
    - Click on “Create” > “Data Source.”
    - Select **Google Sheets** from the list.
2. **Google Analytics:**
    - Select **Google Analytics** from the connectors.
    - Choose the **Account** and **Property** you want to report on.
3. **CSV Files:**
    - Upload a CSV file directly to Looker Studio for quick integration.

# Building Your First Dashboard

1. **Add Charts & Tables:**
    - Use drag-and-drop functionality to add visual elements.
    - Start with simple charts (bar, line, pie) to visualize your data.
2. **Customize Your Design:**
    - Adjust colors, fonts, and chart styles to fit your theme.
    - Add background images, logos, and other branding elements.
3. **Apply Filters and Date Range Controls:**
    - Add dropdowns for users to filter by region, product, etc.
    - Use **Date Range Controls** to allow dynamic date filtering.

# Advanced Features: Data Blending

- **What is Data Blending?**

  Combine data from multiple sources (e.g., Google Analytics + Google Sheets) into a single dashboard.
- **How to Blend Data:**
  - Select your primary data source.
  - Click on “Blend Data.”
  - Choose the secondary data source to combine the data.
- **Use Cases:**
  - Combining customer data with sales data.
  - Merging product performance with marketing campaigns.

# Adding Calculated Fields

- **What are Calculated Fields?**

  Custom metrics and dimensions created based on existing data.
- **Examples:**
  - **Revenue per User** = Total Revenue / Total Users.
  - **Conversion Rate** = (Conversions / Visits) * 100.
- **How to Add:**
  - Click on the **Data** panel.
  - Select **Create New Field** and define your calculation.

# Creating Interactive Dashboards

1. **Interactive Charts:**
   - Add interactive elements like dropdowns, sliders, and date pickers.
2. **User Controls:**
   - Allow viewers to dynamically filter data by **Region**, **Product**, or **Time Period**.
3. **Real-Time Updates:**
   - Dashboards auto-refresh in real-time as data changes.

# Sharing & Collaboration

1. **Sharing Reports:**
    - Click on the **Share** button.
    - Select **Viewers** or **Editors** and send the link.
    - Reports can be shared via email or embedded into websites.
2. **Collaborating in Real-Time:**
    - Multiple users can work on a report simultaneously.
    - Add comments and suggestions directly on the dashboard.

# Best Practices for Designing Dashboards

1. **Keep It Simple:**

   Don’t overload your dashboard with too many charts. Focus on key insights.
2. **Use Consistent Colors:**

   Use brand colors and consistent color schemes for clarity.
3. **Think Mobile-Friendly:**

   Ensure your dashboards are responsive and look good on mobile devices.
4. **Make It Actionable:**

   Dashboards should lead to actionable insights and decisions.

# Common Pitfalls to Avoid

- **Too Much Data:**

  Avoid cluttering your report with unnecessary data that doesn't add value.
- **Complex Visuals:**

  Avoid overly complex charts. Simplicity is key to clear communication.
- **Lack of Interactivity:**

  Users should be able to interact with and filter data based on their needs.

# Resources & Next Steps

- **Explore More Data Sources:**

  Look into other connectors like **SQL databases**, **Cloud Storage**, and **third-party APIs**.
- **Learn Advanced Techniques:**

  Explore **Data Blending**, **Calculated Fields**, and **Advanced Reporting Features**.
- **Practice with Real Datasets:**

  Work on projects using datasets like **disaster analysis** or **clinical resources** to sharpen your skills.
- **Follow the Course:**

  Review the provided materials and continue experimenting with Looker Studio!



# How is Looker Different from Google Analytics?

## 1. Google Analytics

**Google Analytics (GA)** is a tool primarily for **website analytics** and tracking **user behavior** on websites.

**Key Features:**

- **Website Traffic Analytics:** GA tracks and reports on **website traffic**, including visitor count, sources of traffic, devices used, popular pages, and user behavior on the site.
- **Event and Conversion Tracking:** GA allows you to track **user interactions** such as form submissions, purchases, or other key actions on your site.
- **Ease of Use:** It is suitable for beginners and non-technical users who want to analyze website traffic. It works by simply embedding tracking code on your site.
- **Reporting:** Google Analytics provides reports to help you understand **what users are doing** on your site and track the success of marketing campaigns.

**Example Use Cases:**

- Track **website visitors**, campaign performance, and analyze user behavior (e.g., how many users came via social media, organic search, etc.).

## 2. Looker Studio (Google Data Studio)


**Looker Studio** (formerly **Google Data Studio**) is a tool for creating **interactive reports** and **dashboards** that integrate data from multiple sources.

**Key Features:**

- **Multiple Data Source Integrations:** Looker Studio connects with over 150 data connectors (Google Analytics, Google Sheets, BigQuery, MySQL, Salesforce, etc.).
- **Interactive Dashboards:** You can create **interactive dashboards** that allow users to filter data by region, time, or other criteria.
- **Customization:** Offers extensive customization options for how your data is displayed, including charts, graphs, maps, and more.
- **Free and Cloud-Based:** It's a free tool and works seamlessly with other **Google products** and third-party data sources.

**Example Use Cases:**

- Build an **interactive dashboard** that combines **Google Analytics data** with external datasets (e.g., sales data from Google Sheets or BigQuery).
- Create **shareable reports** that allow real-time data interaction and filtering by the user.

## Key Differences:

| Feature | Google Analytics | Looker Studio |
|---|---|---|
| **Purpose** | Website traffic and user behavior analytics | Create reports and dashboards from multiple data sources |
| **Data Sources** | Limited to website data (site traffic, conversions) | Connects to a variety of data sources (Google Analytics, Google Sheets, BigQuery, etc.) |
| **Interactivity** | Basic reporting with limited interactivity | Advanced interactive dashboards with user filters and controls |
| **Customization** | Basic customization of reports | Full customization of charts, colors, fonts, etc. |
| **Main Use** | Analyzing website traffic and marketing campaigns | Building interactive dashboards and reports from multiple data sources |

### How They Can Work Together:

- **Google Analytics** is often a **primary data source** for **Looker Studio**. Looker Studio can pull **Google Analytics data** to display it in **interactive, customized dashboards**.

For example, you can create a dashboard that combines **Google Analytics data** (e.g., user behavior, traffic sources) with additional data from **Google Sheets** or **BigQuery** to gain more insights.

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### Summary:

- **Google Analytics** is ideal for tracking **website traffic** and **user behavior**.
- **Looker Studio** is perfect for creating **dashboards** and **reports** that pull together data from multiple sources, making it easier to visualize and share insights.

Both tools can complement each other, allowing you to **analyze data** and then **visualize it** in ways that are easy to understand and share with others.

# Lab Overview:

## Get Ready to Build Real Dashboards!

In these two hands-on labs, you'll dive into real-world datasets and use Looker Studio to create **actionable, interactive dashboards**.

## 🌀 Lab 1: Disaster Analysis Dashboard

Visualize global disaster data, including tsunamis, floods, and earthquakes.

- **Goal:** Represent disaster occurrences around the world, analyze severity, and gain insights to address global challenges.

https://statanalytica.com/blog/disaster-management-project-ideas/



# Lab 1: Disaster Analysis Dashboard

## Objective:

Create a global disaster dashboard that explores the impact of **tsunamis**, **floods**, and **earthquakes** worldwide.

## What You'll Do:

- Visualize **locations** of major global disasters.
- Analyze **severity** and **frequency** of each disaster type.
- Gain insights into disaster trends to help make **data-driven decisions** for preparedness.

## Dataset:

Download the **Disaster Analysis Dataset** (CSV):

Download Disaster Dataset (CSV)

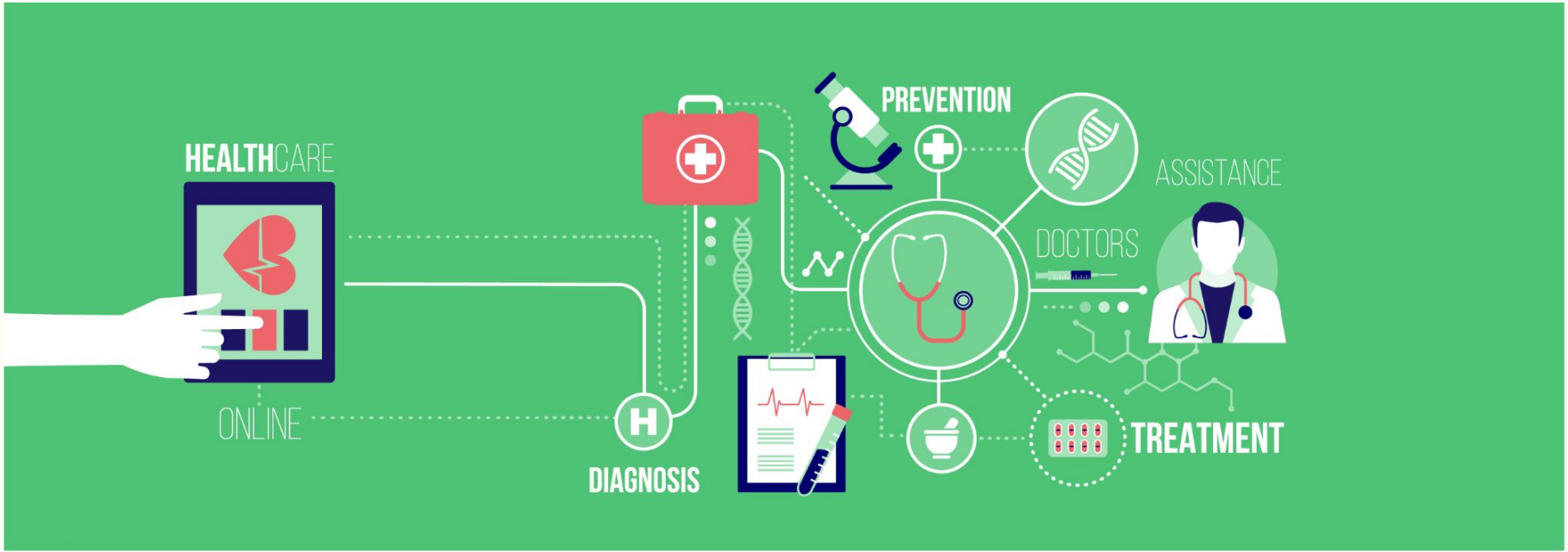
## 🏥 Lab 2: Thailand Clinical Resource Dashboard

Map and analyze healthcare facilities and resources in Thailand.

- **Goal:** Create a dashboard to help stakeholders make informed decisions about the healthcare landscape.

https://www.ready4s.com/blog/electronic-healthcare-resources-the-digitalization-of-medicine





# Lab 2: Thailand Clinical Resource Dashboard

MEDICAL 43
resource solutions

## Objective:

Build a dashboard that helps visualize the **clinical resources** and healthcare infrastructure across Thailand.

## What You'll Do:

- Map out healthcare facilities and **medical resources** across the country.
- Analyze distribution, availability, and accessibility of resources.
- Help decision-makers assess the **current state of healthcare** in Thailand and identify areas for improvement.

## Dataset:

Download the **Thailand Clinical Resources Dataset** (CSV):

Download Thailand Clinical Resources Dataset (CSV)

# Questions?