

POWERBI

DATA GOVERNANCE DASHBOARD

(User Guide)



**Introduction**

This guide helps users understand how to use the Power BI Workspace Usage Dashboard built using Streamlit. The app connects to the Power BI REST API and helps users visualize report, dataset, and user activity across multiple workspaces.

**Software Requirements**:

Python

Streamlit (for the UI framework)

Power BI REST API Access (for fetching reports, datasets, and users)

Required Python libraries:

* streamlit
* pandas
* requests
* plotly
* seaborn

Tools: Visual Studio Code

**3. SET-UP:**

**Install Required Packages** Run the following command in your terminal or command prompt:

**pip install streamlit pandas matplotlib seaborn plotly requests**

Navigate to the app directory.

**cd your\_app\_directory\_name**

Launch the App Run the main Streamlit script

**Streamlit run Home.py**

**WORKFLOW**

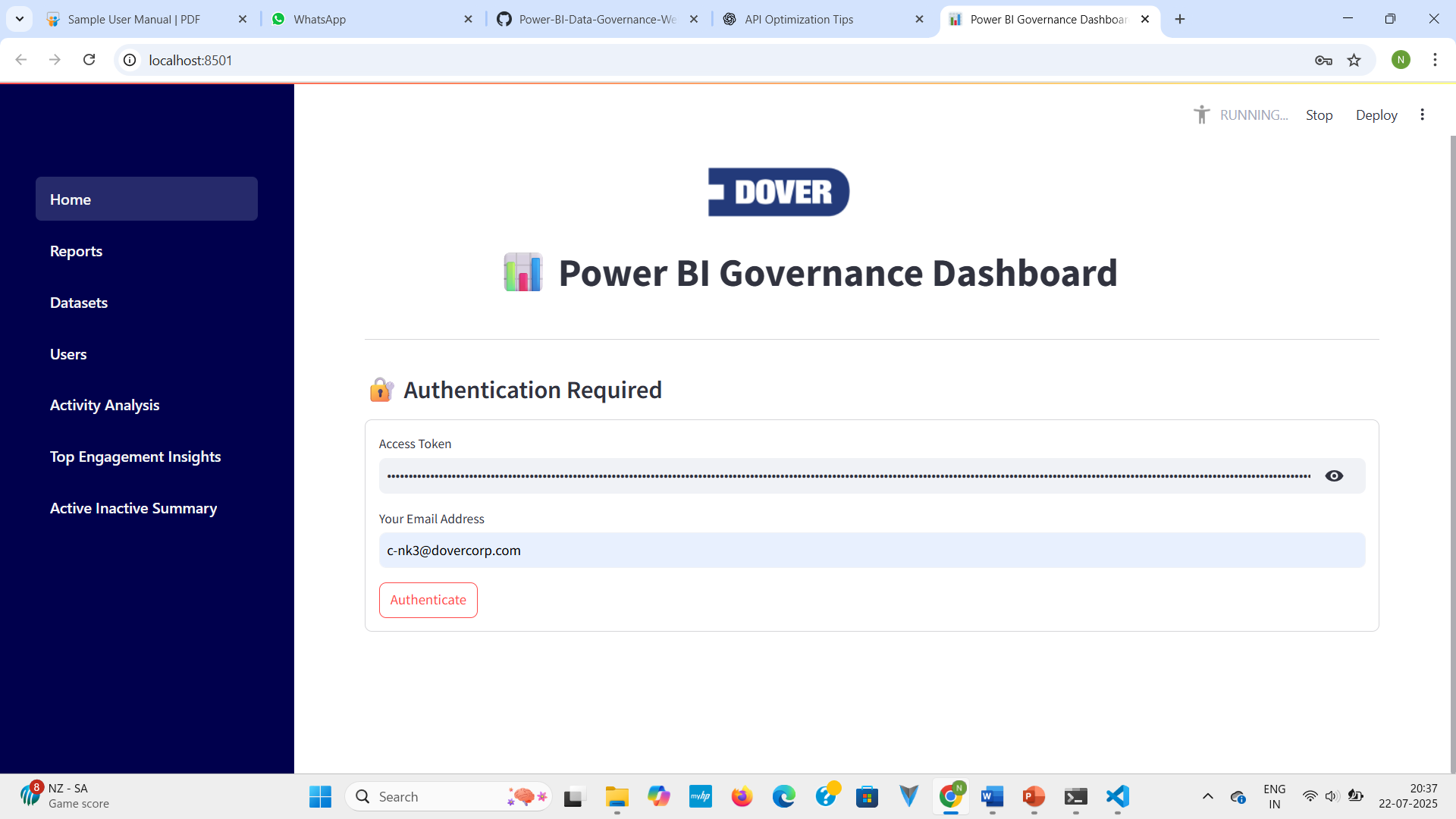
A computer screen shot of a diagram

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**HOME**

**Authentication**

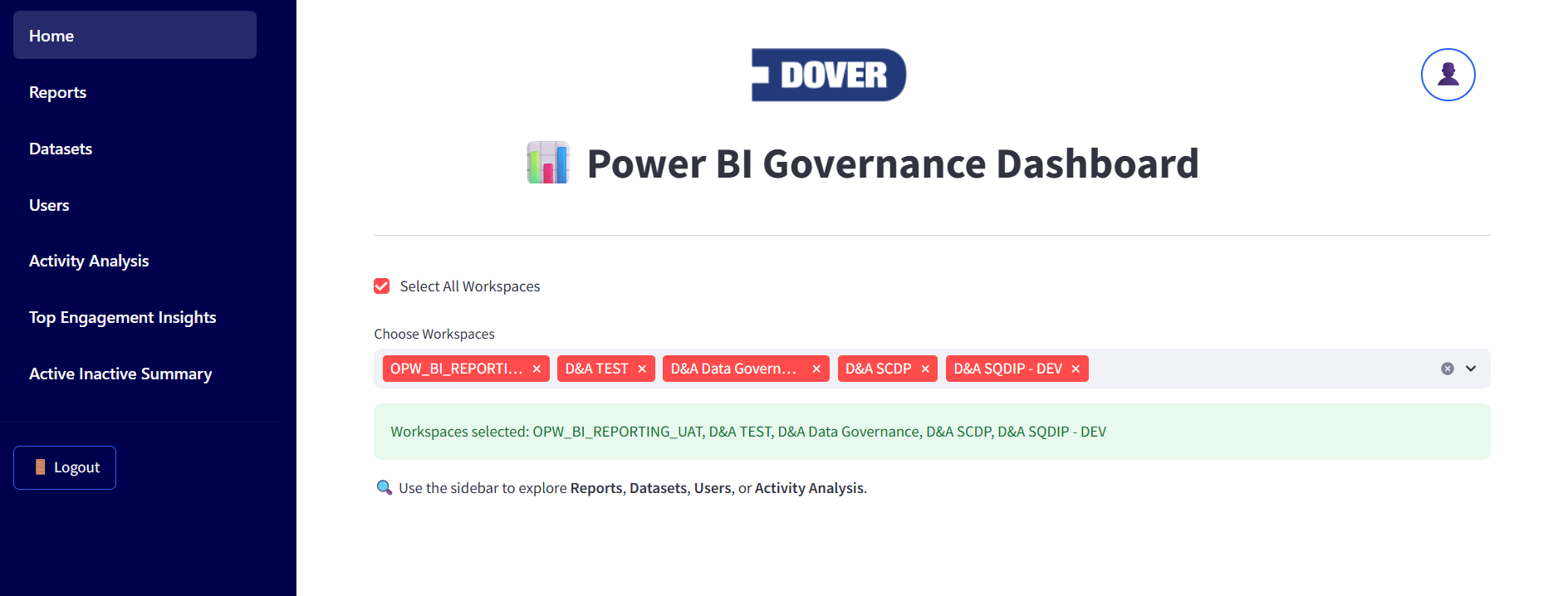
* Copy your access token from microsoft.
* Enter or confirm your email address.
* Click the Authenticate button.
* On success, you’ll be redirected to the Workspace Selection



After successful authentication, you will be directed to the **Workspace Selection** page, where you can choose the Power BI workspace you wish to analyze.

After selection of Workspaces,

Use the **sidebar** to start exploring filtered insights based on your selected workspaces.



**Dashboard Navigation**

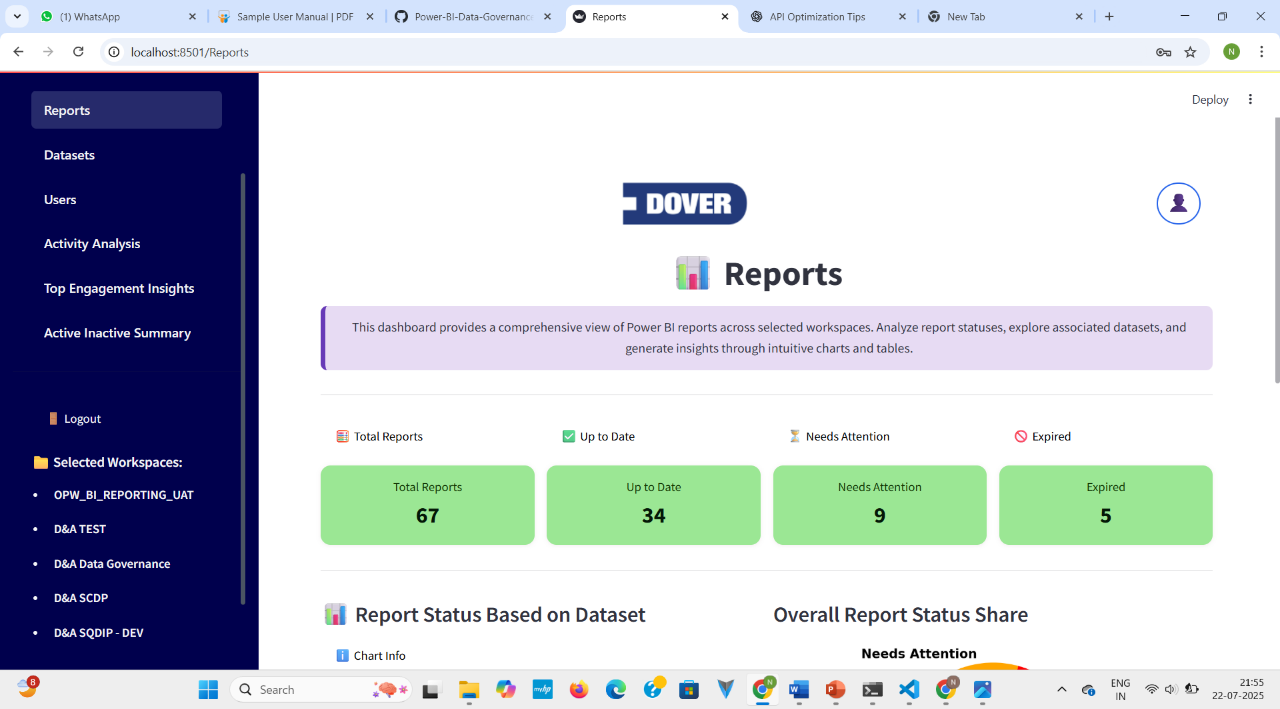
Use the sidebar to explore : Reports, Datasets, Users , Activity Analysis ,Top Engagement Insights ,Active and Inactive assest

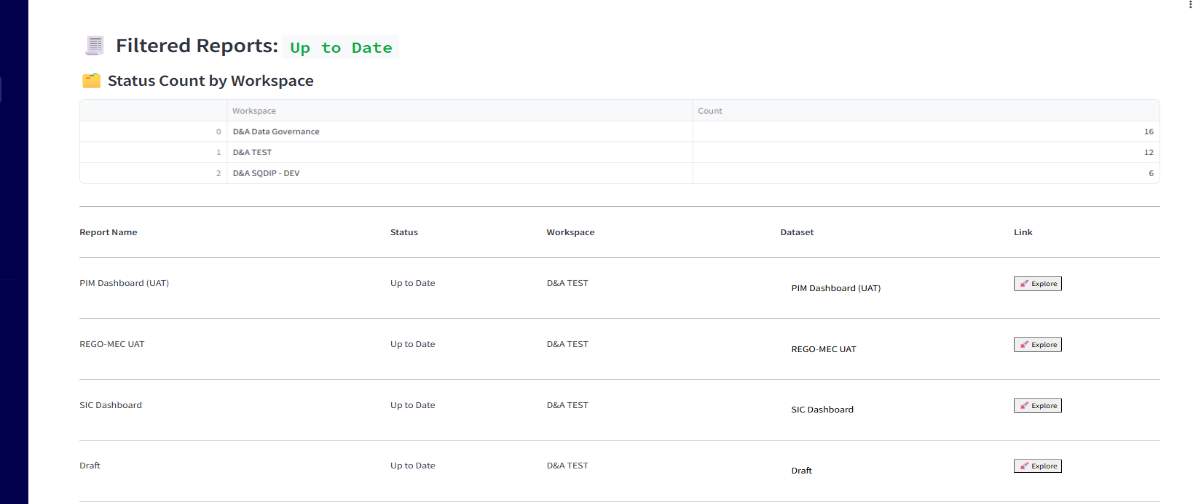
**REPORTS**

This dashboard provides a comprehensive view of Power BI reports across the selected workspaces

**Click the button to analyze** the reports across your selected workspaces. The dashboard will display the following key metrics:

* **Total Reports**:  
  Shows the total number of Power BI reports available in the selected workspaces.
* **Up to Date**:  
  Displays the number of reports that are current and actively maintained.
* **Needs Attention**:  
  Highlights reports that may require updates, reviews, or verification.
* **Expired**:  
  Indicates reports that are outdated, unused, or no longer relevant.





**Visualisations**

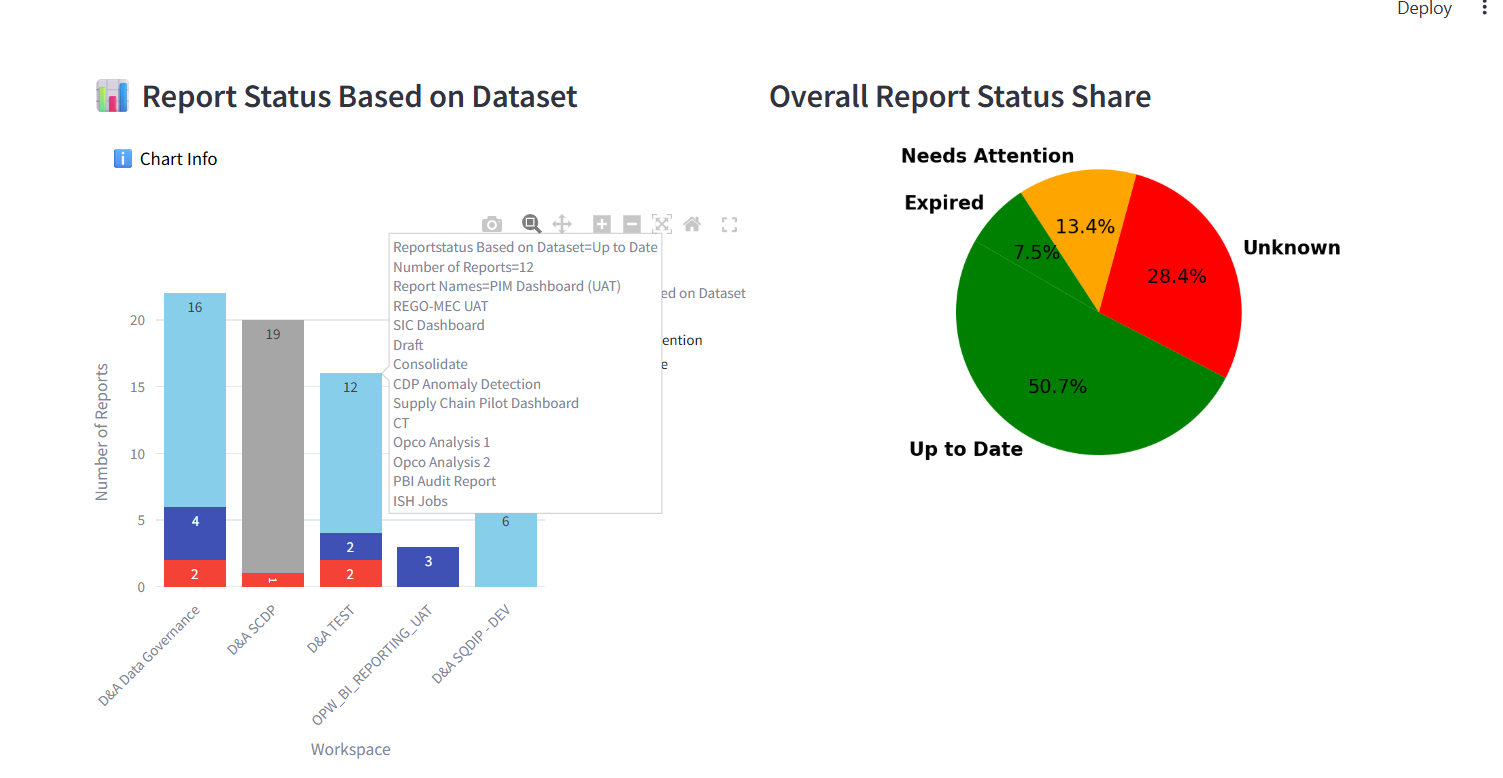
This section includes two key visualizations that help users understand the status distribution of Power BI reports across selected workspaces.

The below visualisations focuses on showing reports status based on related dataset.

* **Up to Date**: Reports linked to datasets and actively maintained.
* **Needs Attention**: Reports that are linked but potentially outdated or inactive.
* **Expired**: Reports considered obsolete or unused for a long time.
* **Unknown:** Reports not linked to any dataset, making status determination impossible.

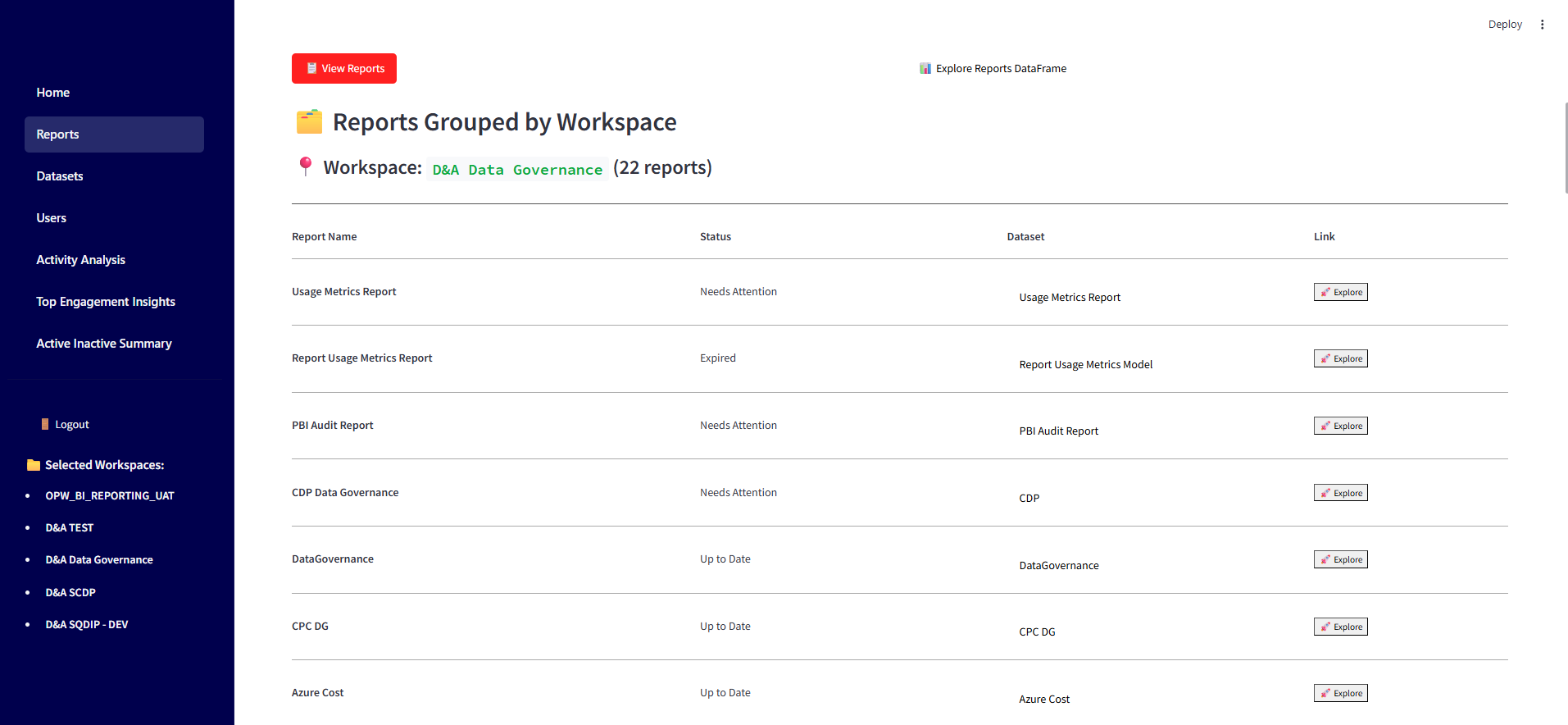
**Bar Chart** – Report Status Based on Dataset  
 To display the number of reports in each status category, grouped by workspace and based on their associated datasets.

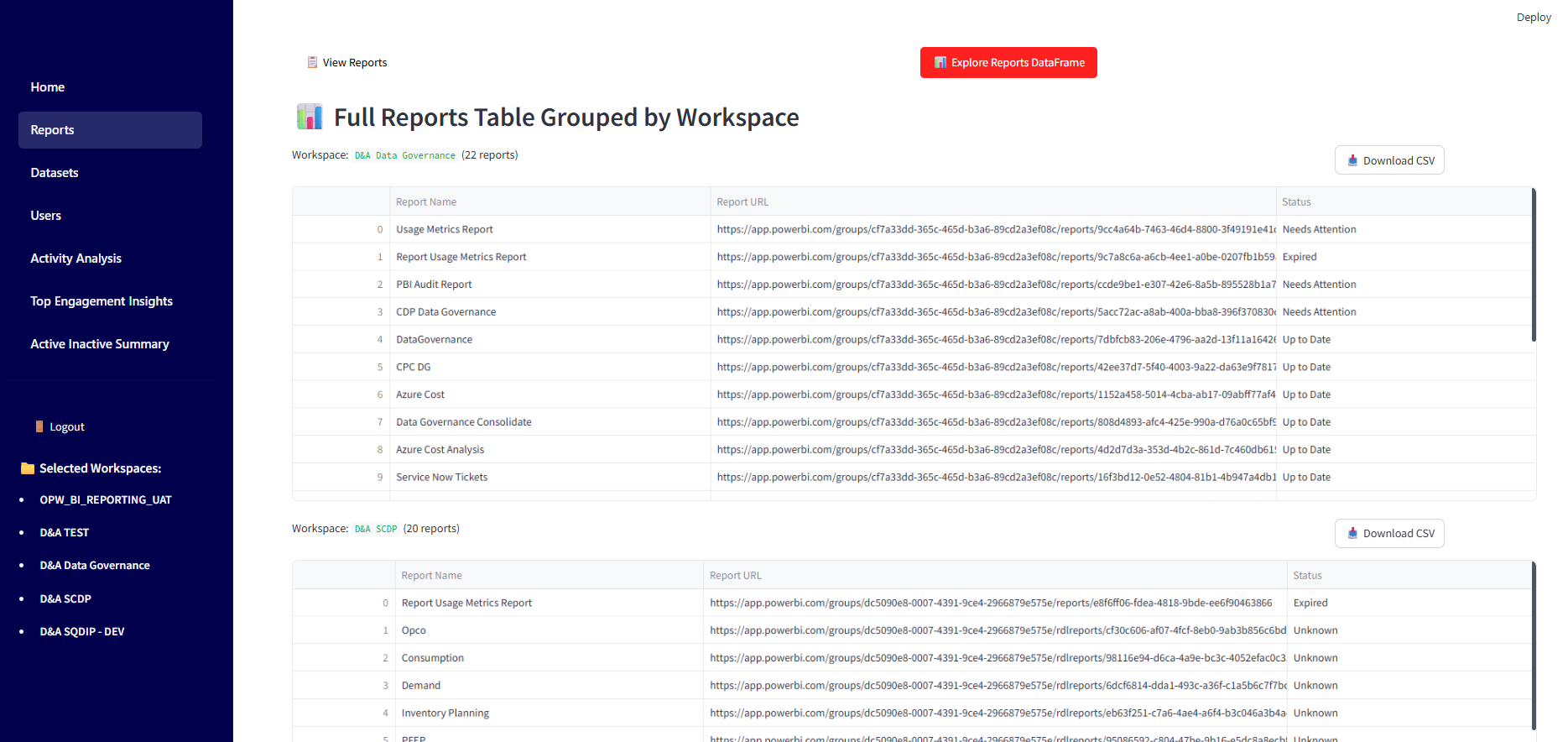
**Pie Chart** – Overall Report Status Share (in %)  
To provide a percentage-based distribution of all reports by their current status,

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Click the View Reports and Explore Reports Dataframe buttons to explore reports for each workspace.

BY Clicking the link You will get redirect to the corresponding report in the **Power BI Service workspace**, where you can view or manage it further.

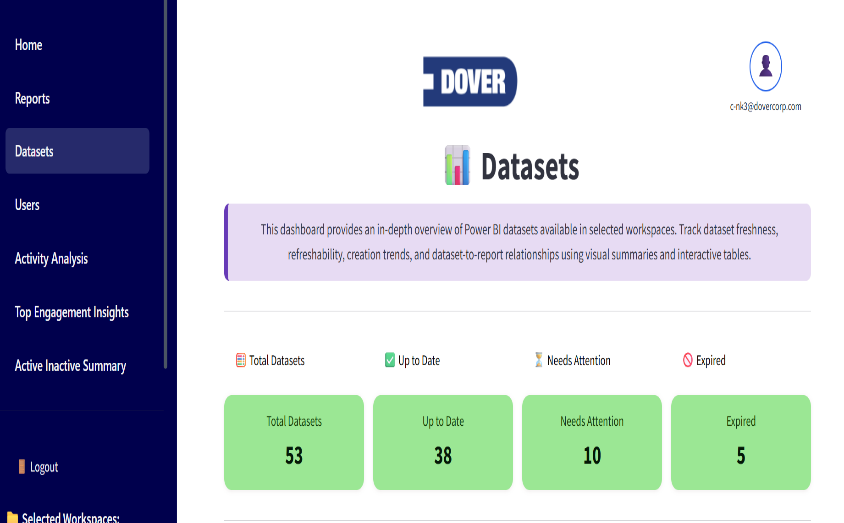




**DATASETS**

The **Datasets Page** provides an in-depth overview of all Power BI datasets available in the **selected workspaces**.

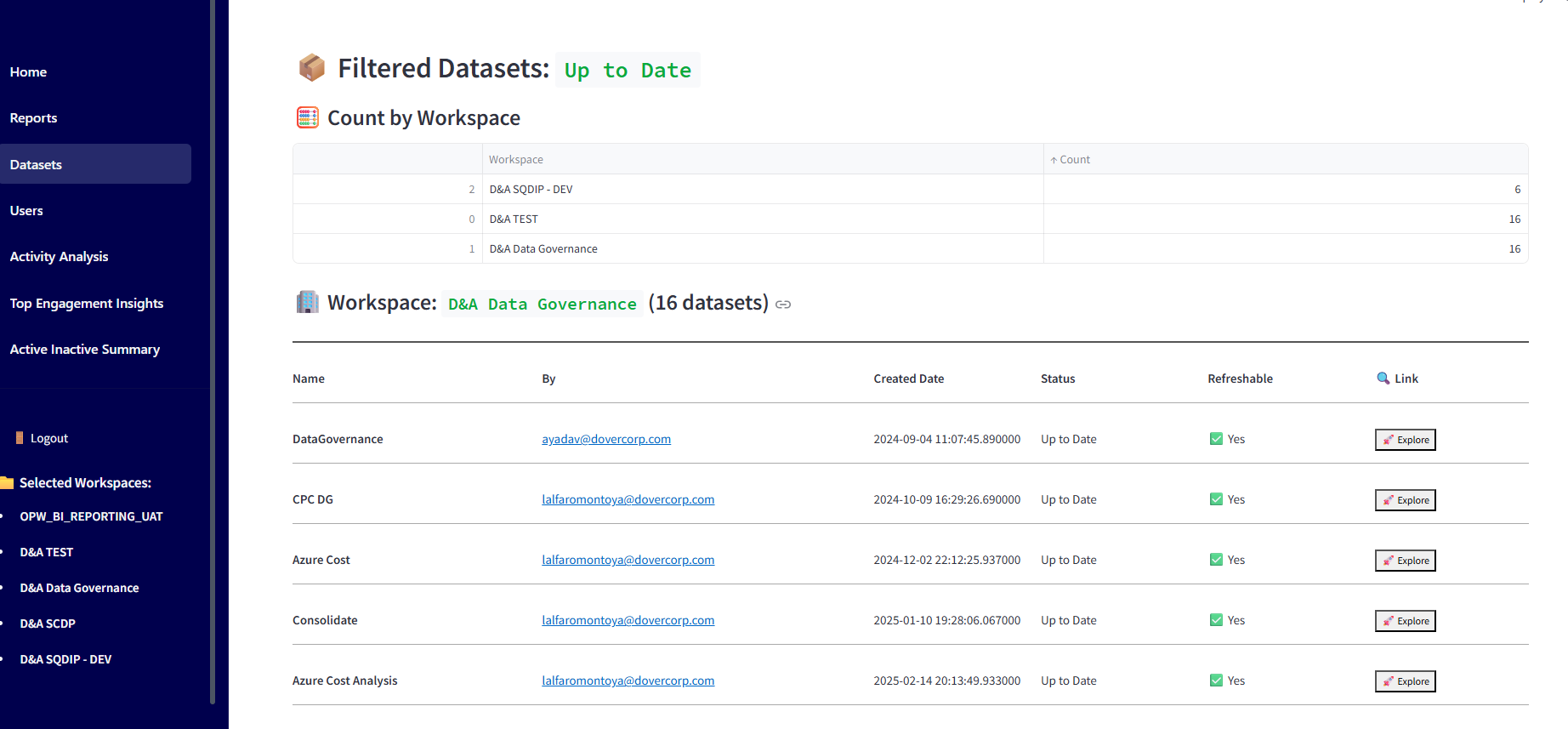
Users can track dataset health, monitor refresh status, analyze creation trends

Click any of the status buttons to filter and explore datasets based on their freshness:

Up to Date :  
 Displays datasets that have been created and refreshed within the last 12 months.

Needs Attention   
 Shows datasets where either the creation date older than 12 months, indicating potential staleness.

Expired   
 Lists datasets that have not been refreshed in over 12 months and are considered inactive or outdated.

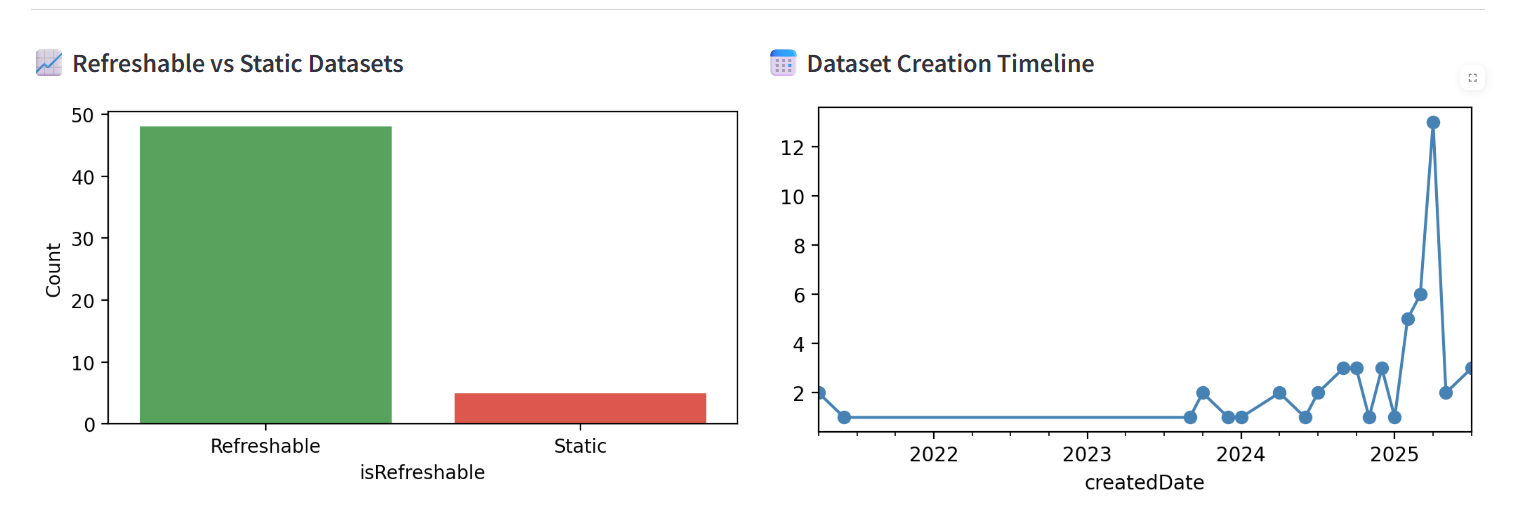


***Visualisations :***

**Refreshable vs Static Datasets (Bar Chart) -** This chart compares datasets based on their ability to refresh

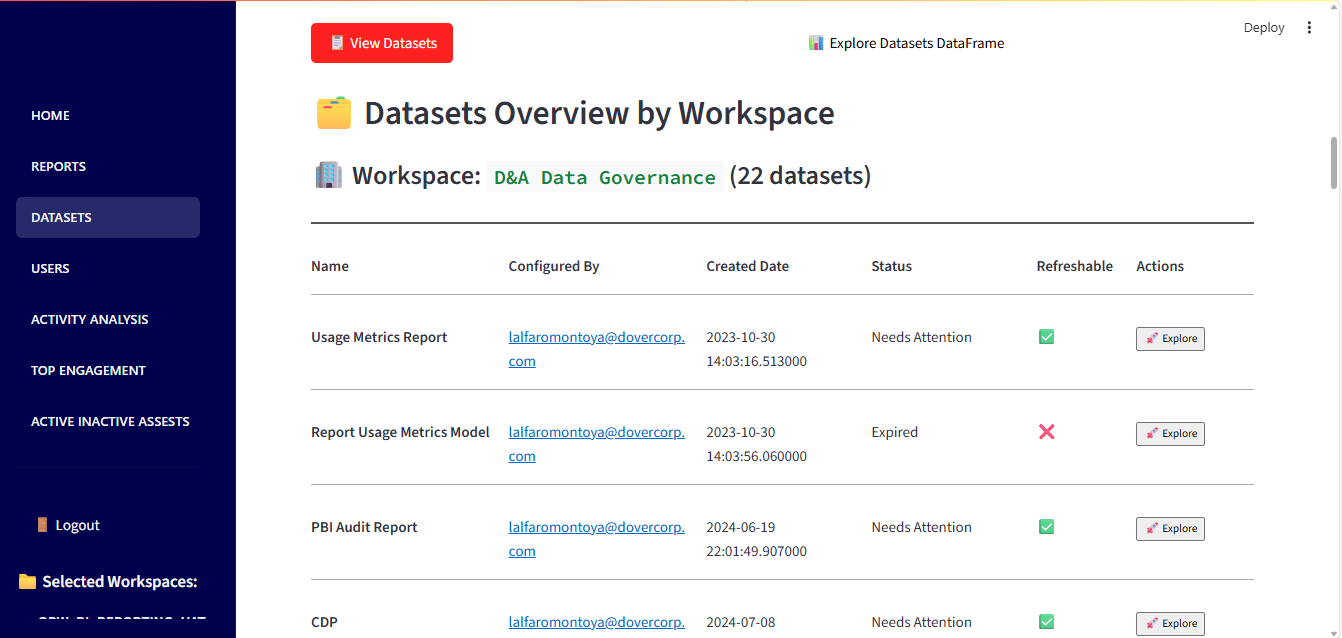
**Dataset Creation Timeline (Line Chart) -** Displays the trend of dataset creation over time.

**Dataset Freshness Status by Workspace (Stacked Bar Chart) -** This visual breaks down the **freshness** of datasets per workspace



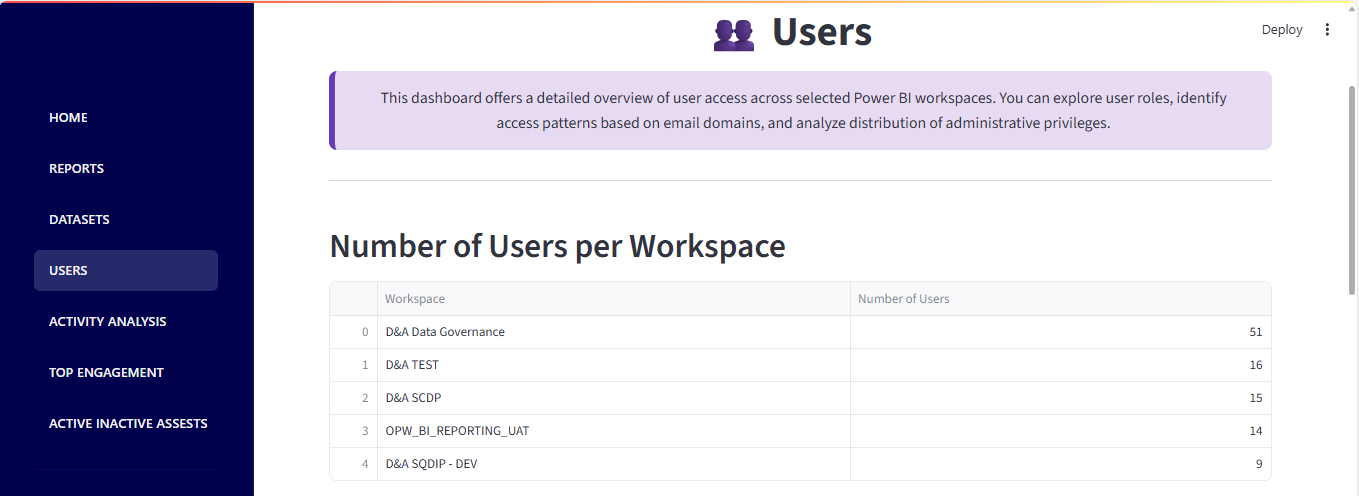
Click the View Datasets and Explore Dataset Dataframe buttons to explore reports for each workspace.

Clicking the Actions will redirect you to the corresponding dataset in the **Power BI Service workspace**, where you can view or manage it further.



**USERS**

The **User Dashboard** provides an interactive overview of user access across selected Power BI workspaces. It allows authenticated users to visualize and analyze key metrics related to user roles, email domains, and administrative rights.



***Visualisations :***

**Group User Access Rights (Pie Chart)**

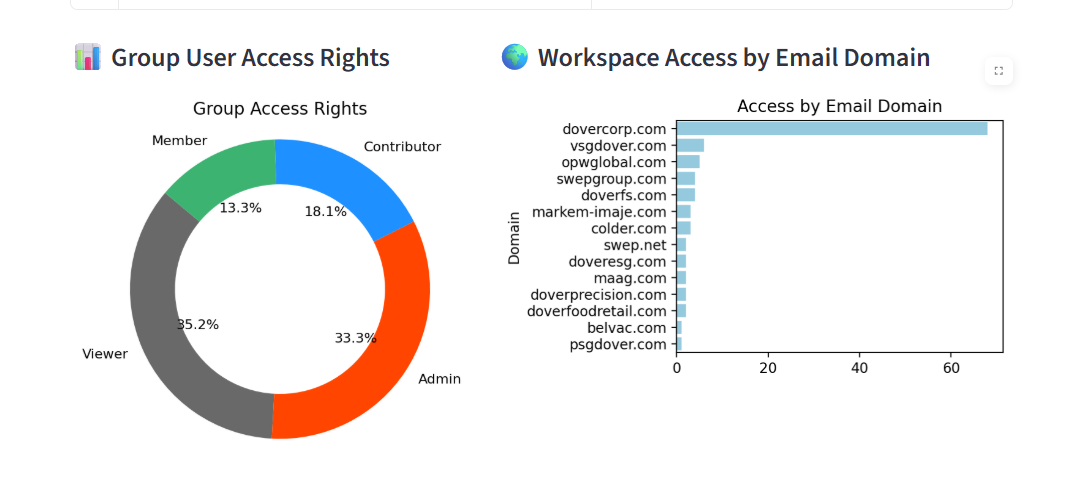
This chart displays the distribution of user roles across the selected Power BI workspaces. Each slice represents a role such as **Admin**, **Contributor**, **Member**, or **Viewer**, with the percentage indicating how commonly each role appears.

**Workspace Access by Email Domain (Bar Chart)**

This horizontal bar chart shows how many users belong to specific email domains (e.g., gmail.com, company.com), helping spot patterns based on organization or user base.

**Email Domain Distribution by Workspace**

A dynamic treemap visualization that segments user counts by workspace and domain. Each rectangle’s size reflects the number of users in that domain within a workspace.



A screenshot of a computer

AI-generated content may be incorrect.

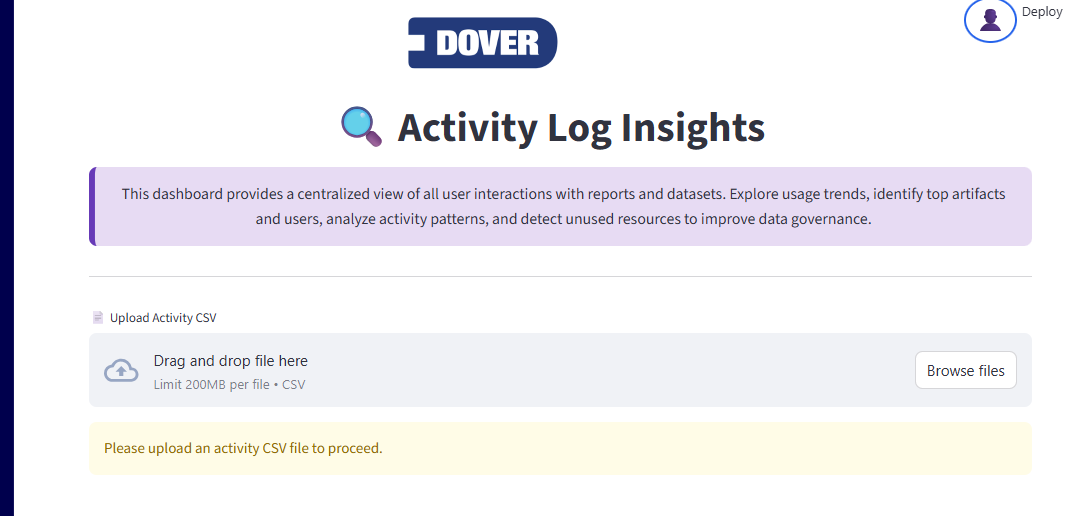
Click the View Users and Explore User Dataframe buttons to explore reports for each workspace.

A screenshot of a computer

AI-generated content may be incorrect.

**ACTIVITY ANALYSIS**

This dashboard provides a centralized view of all user interactions with reports and datasets. Explore usage trends, identify top artifacts and users, analyze activity patterns, and detect unused resources to improve data governance

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After Uploading the file,click the expander to analyse visualisations

**A screenshot of a computer

AI-generated content may be incorrect.**

VISUALISATIONS :

**1.Full Artifact Access Heatmap**

* This heatmap presents a grid-style view of user interactions with various reports and datasets.
* Helps identify which artifacts are most engaged with and which users are the top contributors. It can reveal both active and inactive usage zones.
* Each cell shows how often a user accessed a specific artifact. Darker shades indicate higher access frequency.

A graph with a chart and text

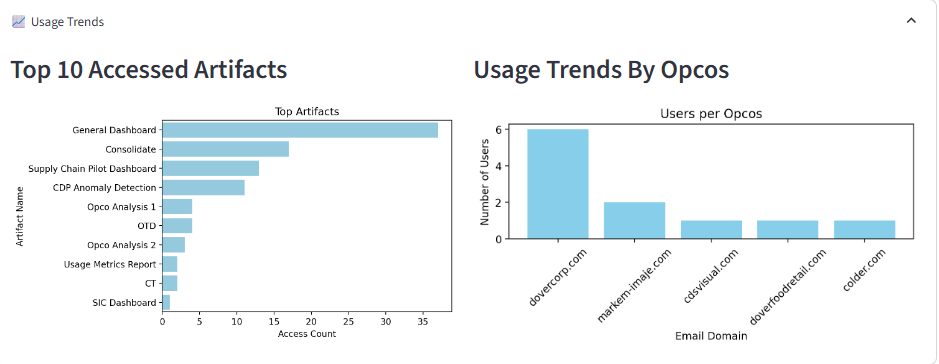
AI-generated content may be incorrect.

**2. Top 10 Accessed Artifacts**

* A bar chart ranking the most accessed artifacts (reports/datasets) by total interaction count.

**3. Usage Trends by Domain (Opcos)**

* This chart shows how many unique users belong to each email domain (e.g., company.com, gmail.com).
* Useful for understanding organizational distribution and external access.

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**4. Weekday Activity Line Chart**

A time-series line chart showing user activity levels across days of the week.

**5. Monthly Usage Trend**

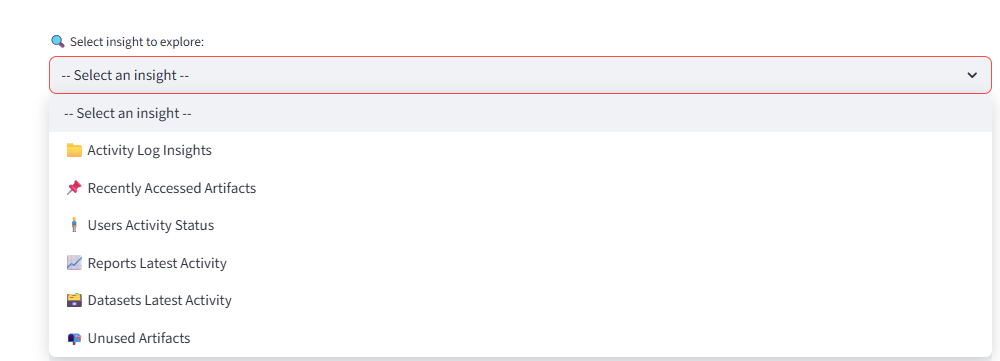
A bar chart showing user interactions over each month.

A graph and chart with orange dots

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**Activity Insights Section**

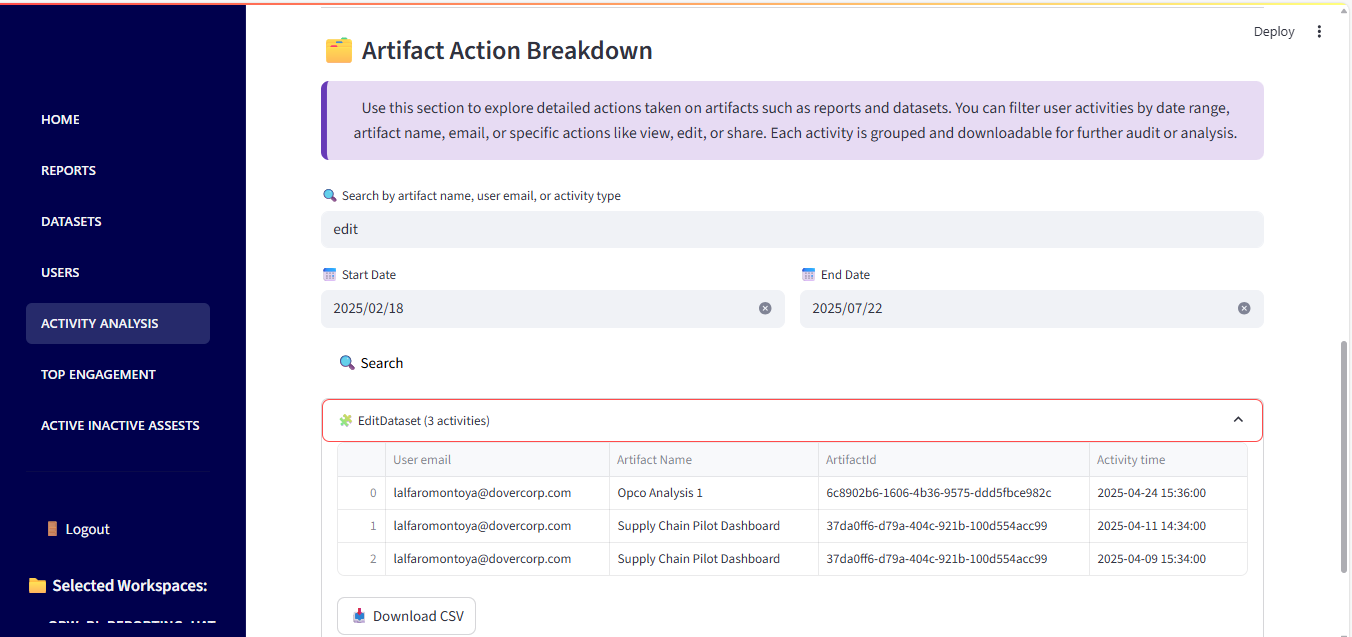
This interactive module allows users to explore detailed activity metrics across Power BI artifacts and users. By selecting an insight from the dropdown, users can access specific dimensions of usage behavior, enhancing transparency, optimization, and governance.



|  |  |
| --- | --- |
| Insights | Purpose |
| Activity Log Insights | Displays raw logs of every access event, including who, what, and when. |
| Recently Accessed Artifacts | Displays a snapshot of the latest activity across reports and datasets to monitor user engagement. |
| Users Activity Status | Shows each user's most recent activity timestamp and active/inactive status.(based on last 3 months) |
| Reports Latest Activity | Highlights report-level access trends and freshness status. |
| *Datasets Latest Activity* | Provides detailed usage and freshness metrics for datasets. |
| *Unused Artifacts* | Identifies reports and datasets with no recorded access, supporting cleanup. |

**Artifact Action Breakdown**

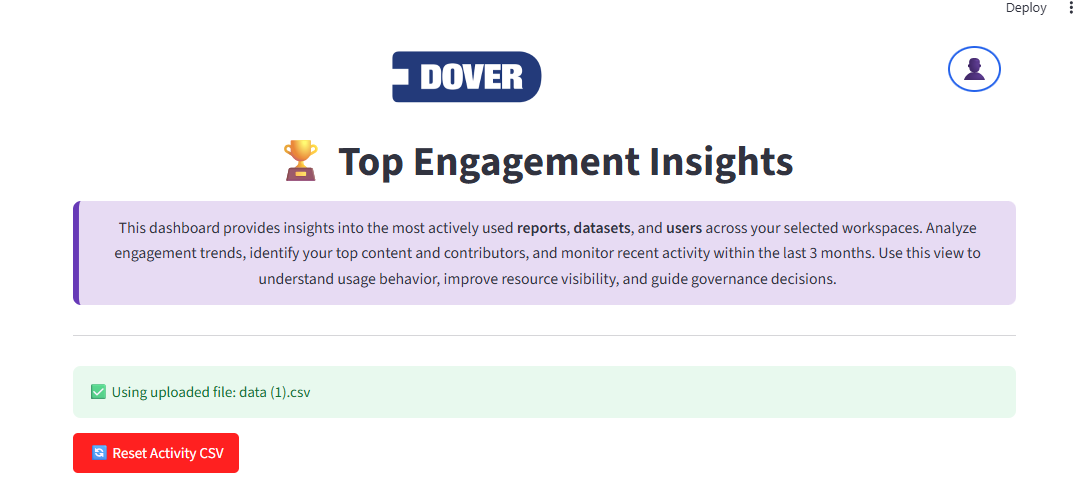
Use the search panel to filter and view specific user activity logs by date, user email, artifact name, or action type—like view, edit, or share—with download options for each grouped activity



**TOP ENGAGEMENT INSIGHTS**

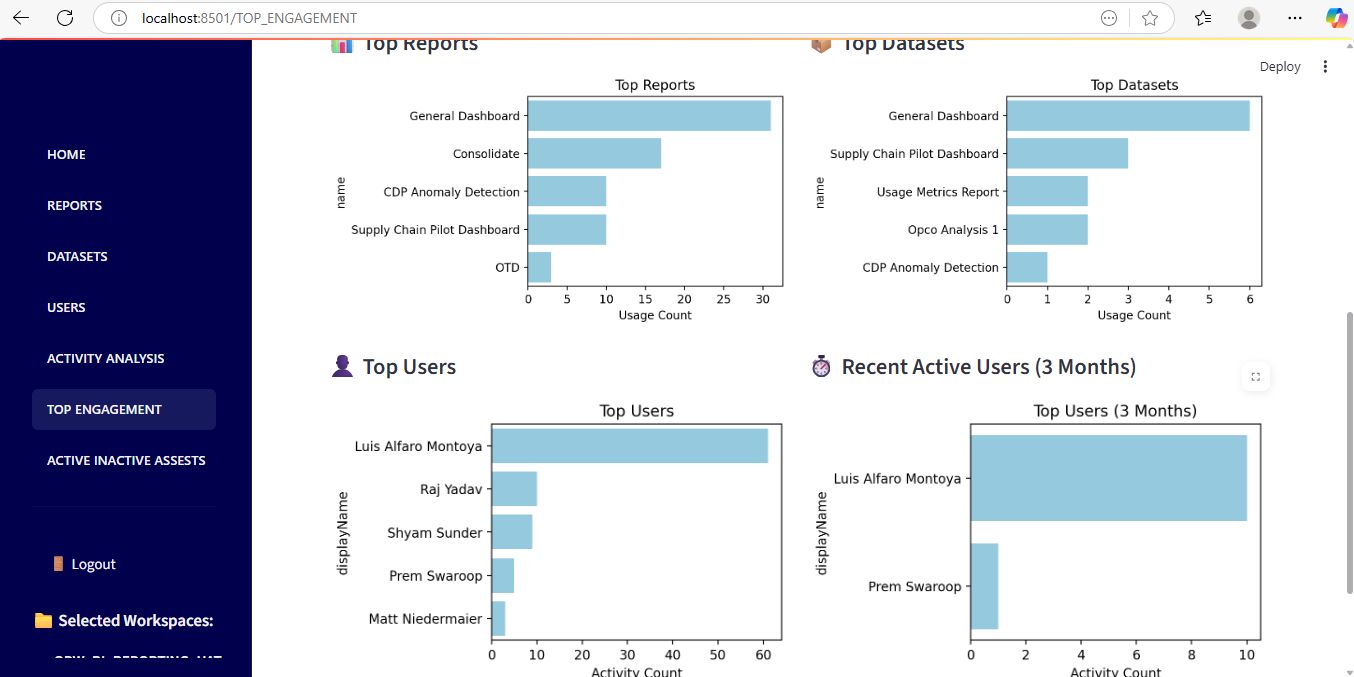
This dashboard provides a strategic overview of high-engagement assets and users within selected Power BI workspaces. It highlights the most actively accessed **reports**, **datasets**, and **users.**

**Once the activity CSV is uploaded, it remains available across all dashboard pages no need to re-upload. If needed, you can reset the file anytime to upload a new one**

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**Visualisations :**

|  |  |  |
| --- | --- | --- |
| **Panel** | **Purpose** | **How It Works** |
| Top Reports | |  |  | | --- | --- | |  | Identifies the 5 most frequently accessed reports | | Filters activity logs by report IDs and ranks them by usage count |
| Top Datasets | Highlights the 5 datasets with highest engagement | Filters dataset activity, aggregates access events, and plots the top performers |
| Top Users | Displays users with the most total interactions across artifacts | Counts activity entries per user and visualizes engagement levels |
| Recent Active Users (3 Months) | Tracks users who have interacted recently (within last 90 days) | Filters recent activity and identifies top contributors based on email mapping and usage volume |



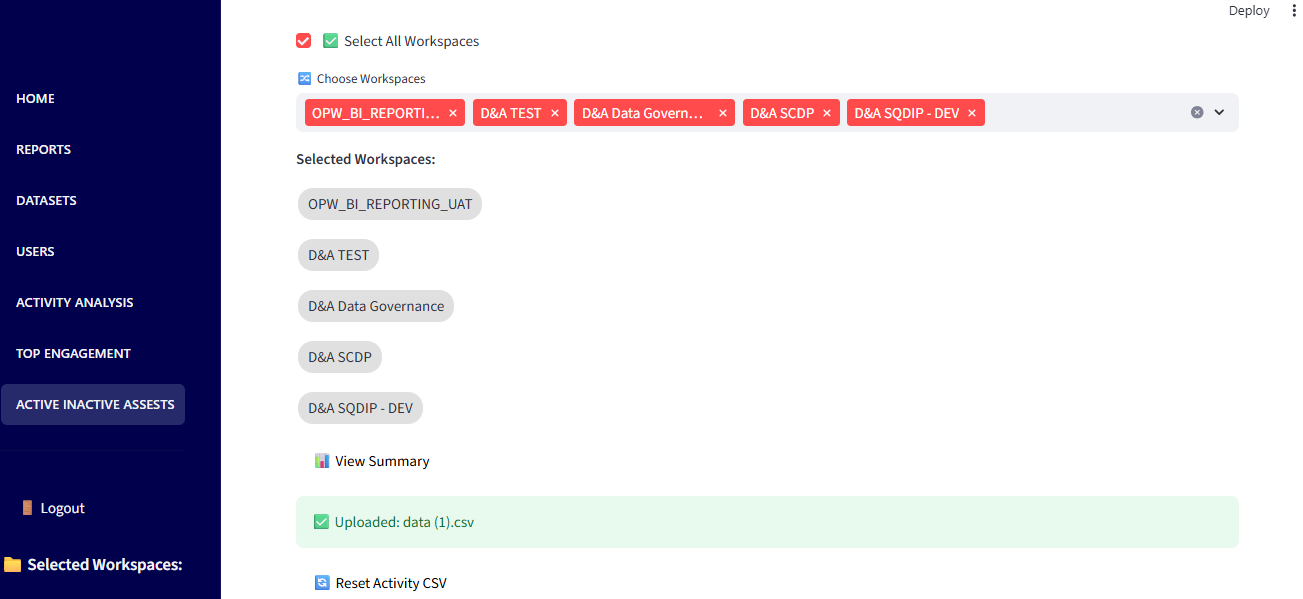
**ACTIVE INACTIVE ASSESTS**

This dashboard provides a high-level overview of active and inactive reports, datasets, and users within selected Power BI workspaces. It's designed to help teams monitor data engagement, identify underused resources, and enhance governance efforts.

**STEPS**

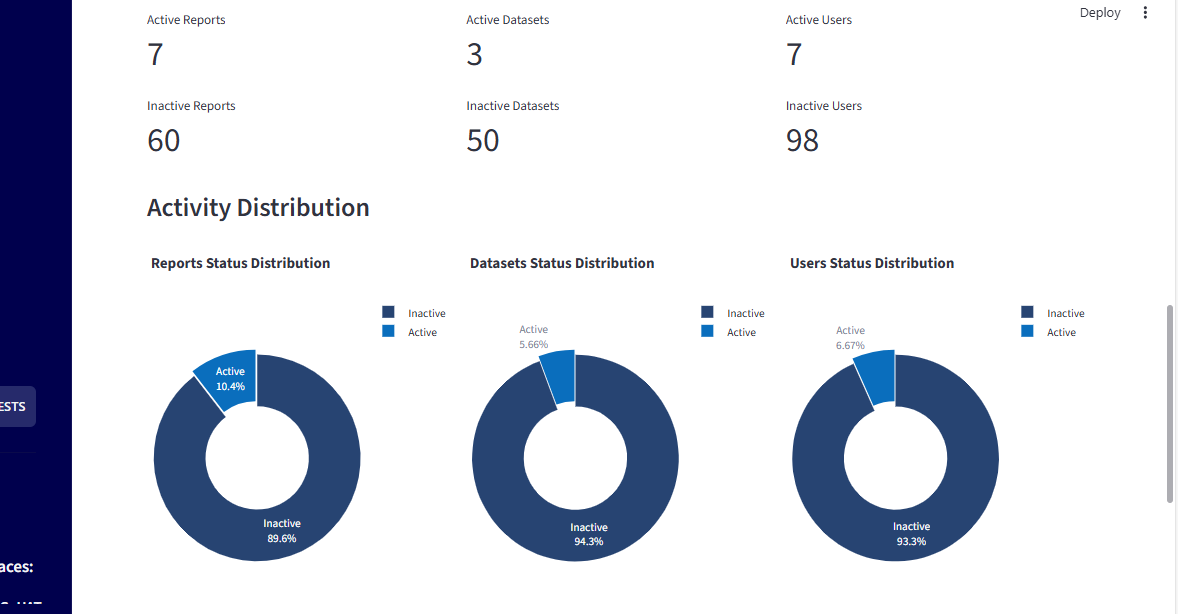
1. **Select the workspaces** you want to analyze from the dropdown.
2. Click **" View Summary"** to load insights for the selected workspaces.
3. **Upload the activity CSV file**.

* Once uploaded, the file stays available across all dashboard pages—no need to re-upload.
* If you'd like to use a different file, you can reset the upload anytime.

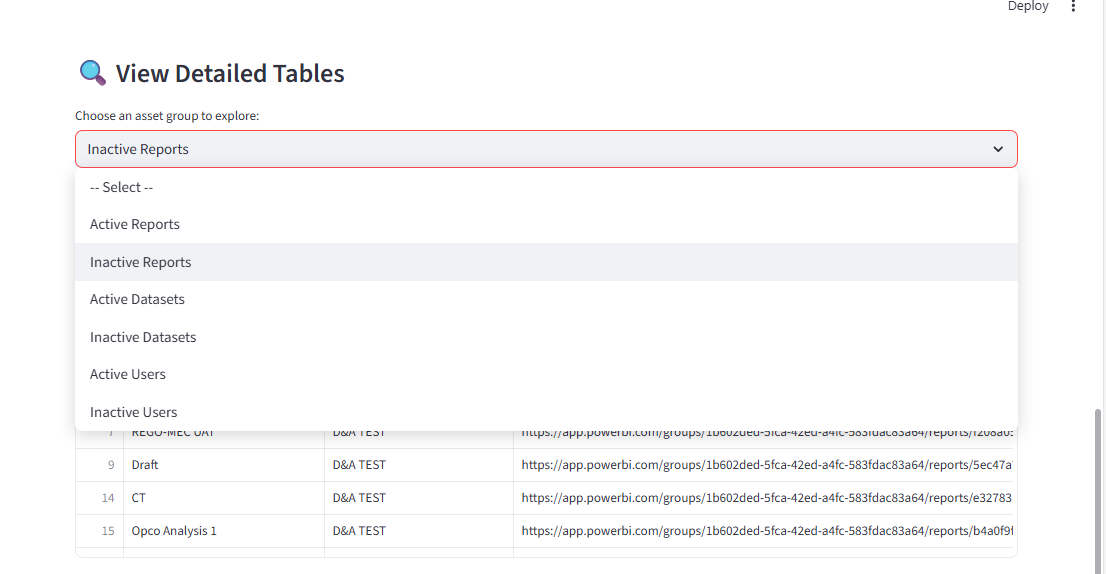


After Selection of Workspaces ,

|  |
| --- |
| Displays counts of active and inactive reports, datasets, and users. |
| Visualizes percentage breakdowns of activity status for each category. |



|  |  |
| --- | --- |
| **Detailed Tables** | Allows users to explore and filter asset-level activity status. |



**Logout**

* Click the "Logout" button in the sidebar if needed
* This will clear session state and return you to login view

**WORKFLOW :**

**User Login**

**↓**

**Workspace Selection**

**↓**

**Dashboard Navigation via Sidebar**

**Reports , Datasets,Users Pages**

**Top Engagement Insights**

**Active vs Inactive Summary**

**Activity Log Viewer**

**↓**

**Secure Logout**