

# CS App

Transforming Business Reports with Customized User Interfaces and Efficient Workflows.





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# 1. Introduction

A customized interface enables organizations to present their data and insights in a user-friendly manner, perfectly aligned with their unique requirements. ConverSight, through its CS App, offers a comprehensive solution that effectively addresses these needs, allowing businesses to create compelling and effective interfaces for their reports. This whitepaper delves into the rich array of capabilities offered by the ConverSight platform through its CS App, demonstrating how it facilitates the seamless creation of customized user interfaces for business reports, thereby transforming the way organizations harness and present their data for maximum impact.

## 2. Exploring the CS App

The **'csapp'** package is used to create CS App, and it is offered by ConverSight to enable the creation of UI-based tasks tailored to their needs. With a diverse range of components including dropdown menus, radio buttons, checkboxes, chat bots, toggle buttons, CS Table and more. The csapp package provides a comprehensive toolkit for designing user interfaces. These components serve as building blocks for crafting intuitive and interactive interfaces that enhance user experience. By utilizing these extensive options, businesses can design customized user interfaces that align with their branding, streamline workflows and optimize usability.

The CS App offers a range of practical use cases, prominently featuring the Supply Planner and Build Planner functionalities. The Supply Planner involves a comprehensive amalgamation of demand forecasting, resource allocation and the identification of critical attributes influencing customer satisfaction and retail revenue. Similarly, the Build Planner integrates demand forecasting and resource allocation within the context of manufacturing operations, pinpointing key factors impacting customer satisfaction and overall manufacturing unit revenue

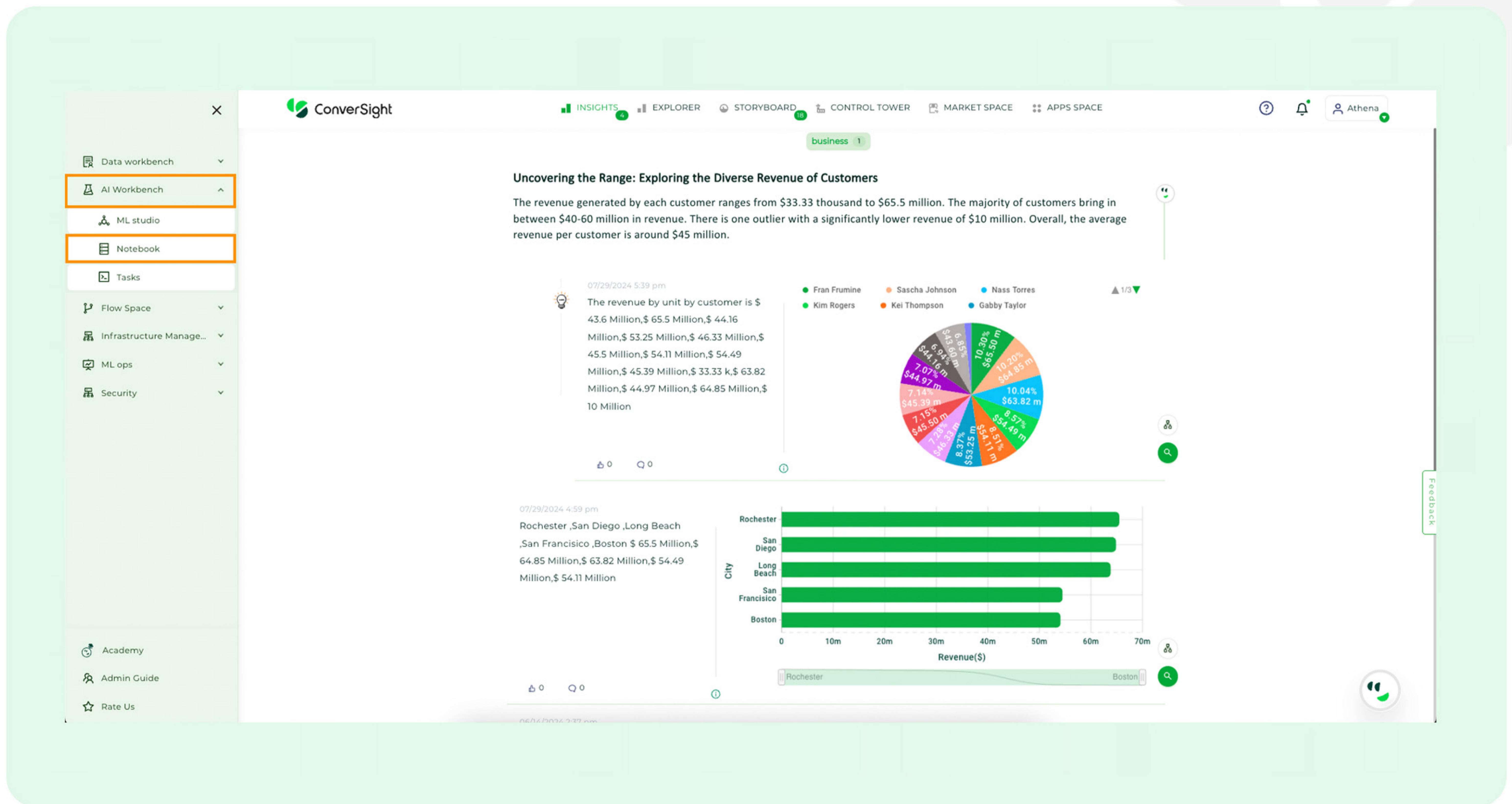
## 3. Advantage of CS App

The CS App offers businesses the benefit of designing personalized user interfaces that precisely align with their needs. This level of customization significantly enhances the overall user experience, resulting in higher engagement, increased user satisfaction and improved productivity. Furthermore, the CS App optimizes workflows by integrating purpose-built components that streamline task completion. This ensures efficient and smooth operations within the app.

Additionally, the CS App enables businesses to maintain brand consistency throughout their user interfaces, establishing a cohesive identity and instilling trust among users. The app's adaptability further adds value, allowing organizations to easily modify and fine-tune the interface to accommodate evolving requirements, guaranteeing its ongoing effectiveness and relevance.

## 4. Accessing the Notebook

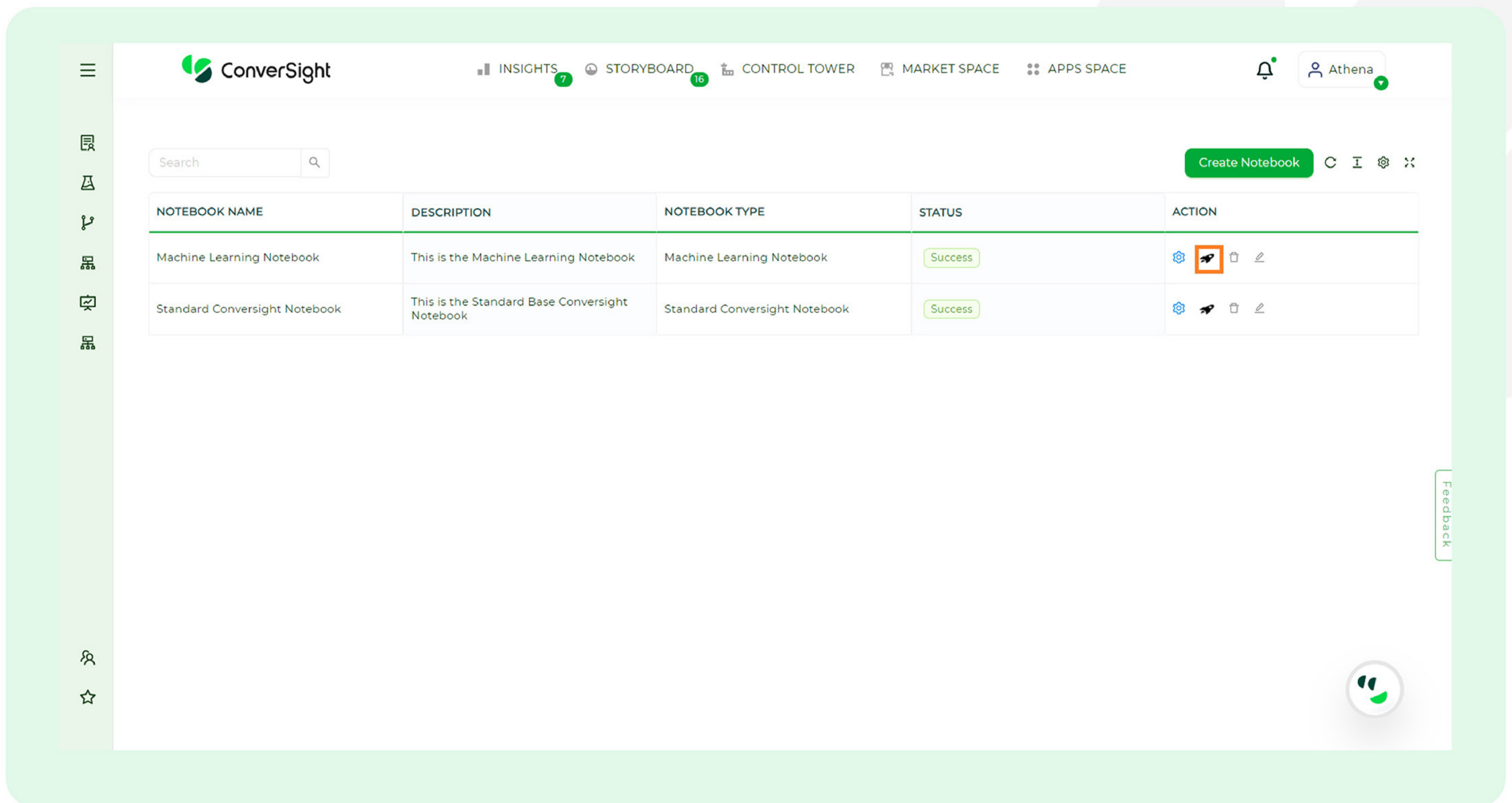
To access the Notebook, select the **'Notebook'** option under **'AI Workbench'** menu from the configuration panel.



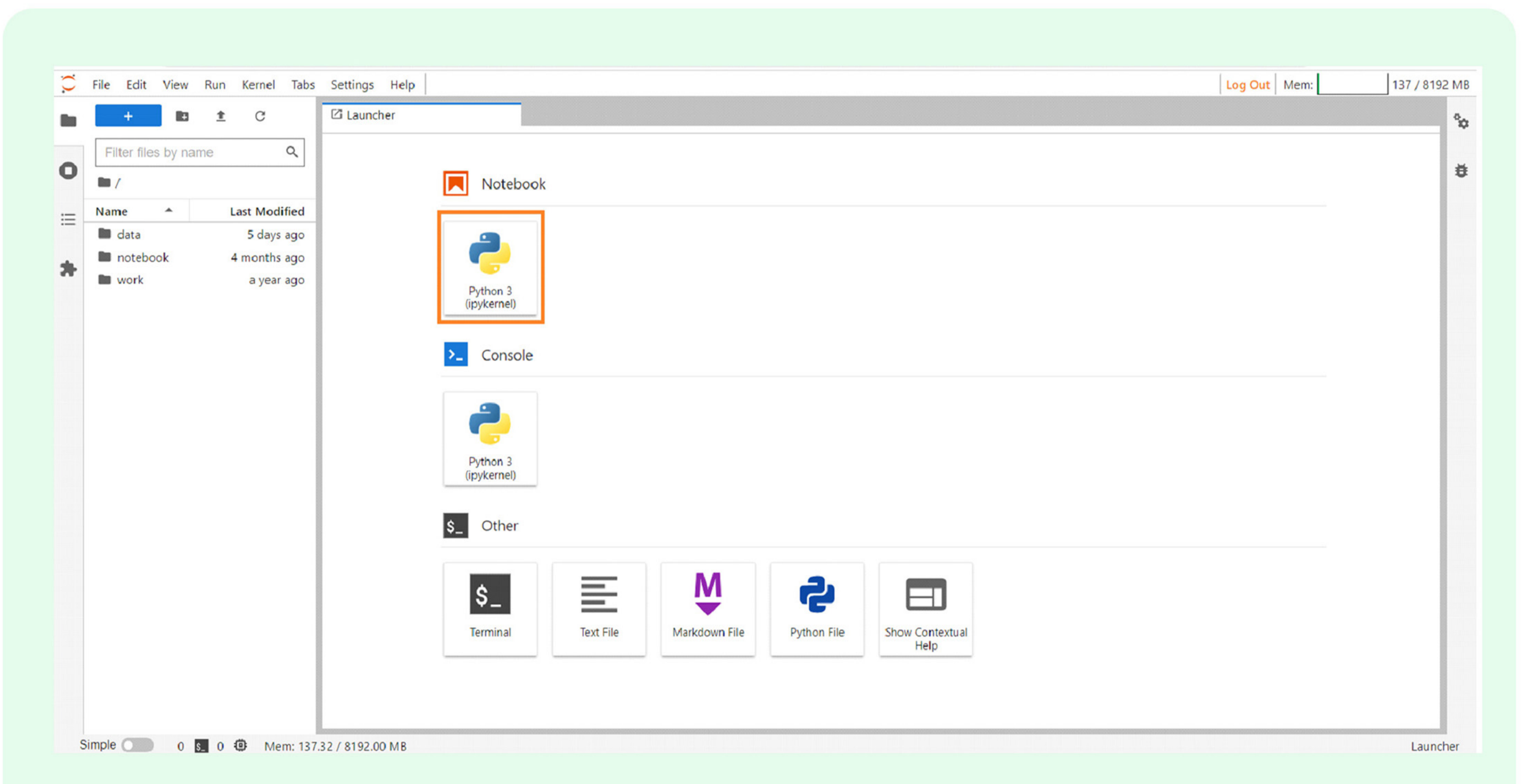
ConverSight offers two primary Base Notebooks:

- Standard ConverSight Notebook
- Machine Learning Notebook.

The **Standard Notebook** acts as a core tool that includes essential packages for executing tasks, flows, CS App. Meanwhile, the **Machine Learning Notebook** is tailored to meet the advanced needs of machine learning and complex analytics, providing users with a comprehensive set of packages for these specialized tasks.



Upon launching the Notebook, the user will be redirected to the 'Jupyter Hub'. Open the 'notebook' directory and choose the 'Python3 (ipykernel)' Notebook.



## Note

Any file created outside the notebook directory will not be retained.

## 5. Creating the CS App

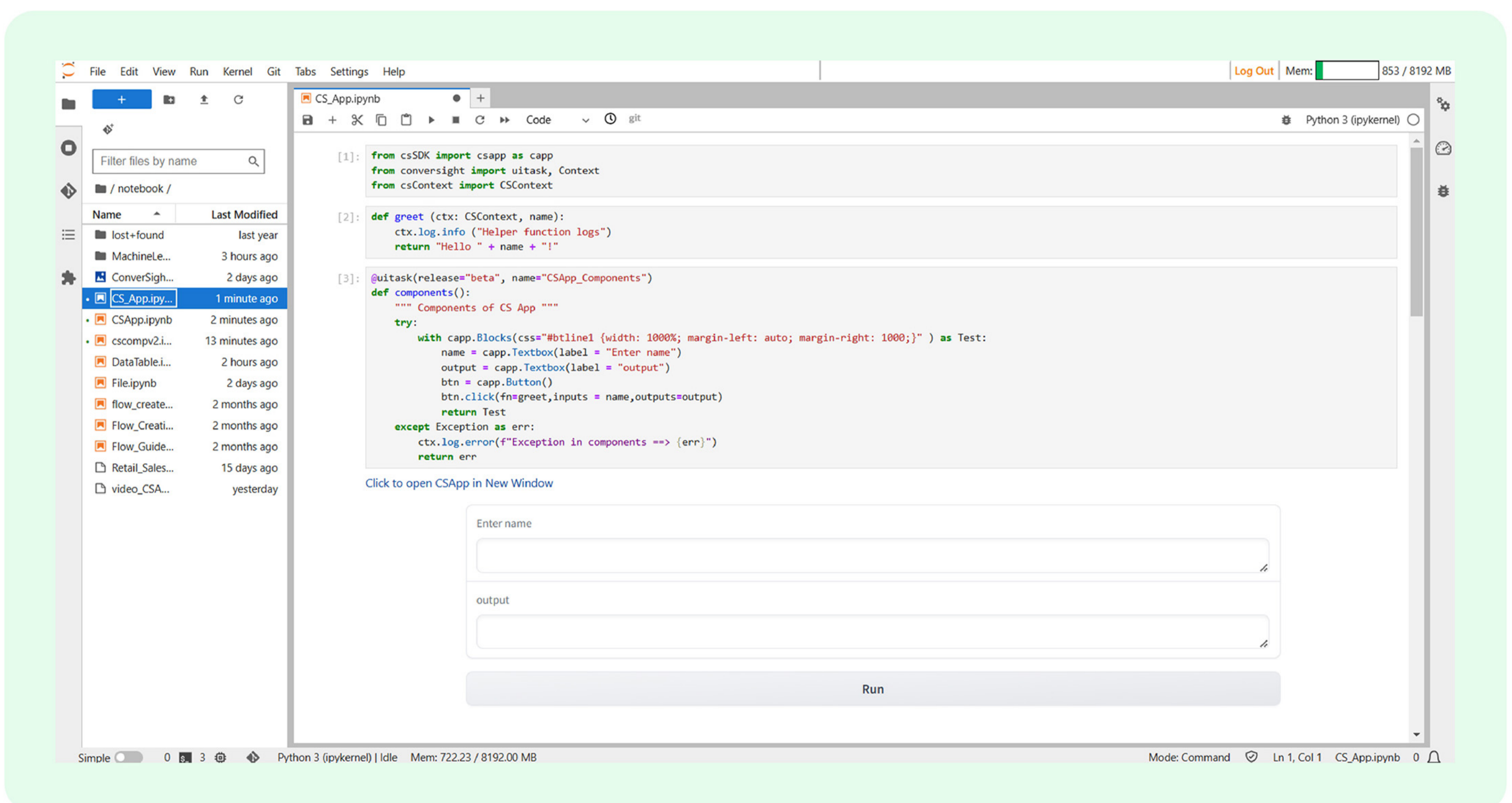
To create a CS App, begin by importing necessary packages from the **ConverSight Software Development Kit (csSDK)**. The `csapp` package from csSDK contains essential components for building the CS App interface. Additionally, you should import `uitask` and `Context` from the `conversight` library. The `Context` package provides functions that enable session and log monitoring within the CS App. In line with ConverSight's development standards, ensure error handling with try-except blocks and include detailed docstrings for better understanding. Also, make sure to use the `@uitask` decorator to register functions as UI tasks, allowing them to integrate seamlessly within the CS App framework.

### 5.1 User Interface Task

Once these essential tools are set up, users can fully utilize the `@uitask` decorator. This decorator becomes the link that effectively combines user interface development with analytical capabilities. Within the UI Task framework, users can seamlessly craft user interfaces, spanning various UI flows and web-based apps catering to diverse customer needs. The framework's essence lies in integrating helper functions, each designed to execute specific logic triggered by events-these could be user actions, system events or data changes.

After creating the UI Task, it's vital to run and then register the task. Importantly, users are relieved of the need to separately register helper functions. These functions automatically get registered alongside the UI Task, significantly streamlining the entire process.

In essence, this comprehensive framework revolutionizes UI design, paving the way for the creation of exceptional user interfaces that are dynamic, intuitive and finely tuned to user needs.



The screenshot displays a Jupyter Notebook environment with the following components:

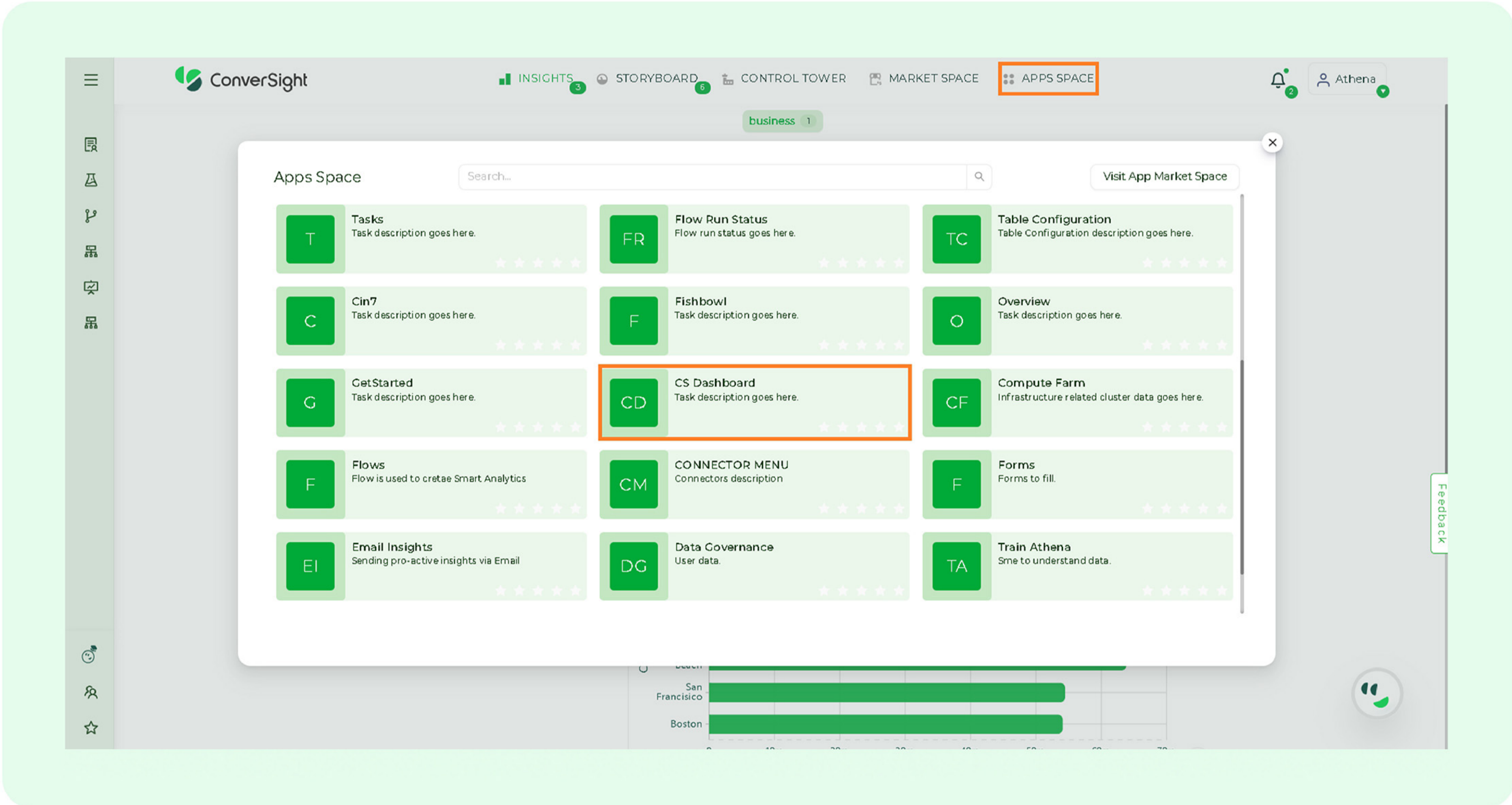
- Code Cell [1]:** Imports `csapp` from `csSDK`, `uitask` and `Context` from `conversight`, and `CSContext` from `csContext`.
- Code Cell [2]:** Defines a `greet` function that logs and returns a greeting.
- Code Cell [3]:** Uses the `@uitask` decorator to register a `components` function. The function uses `capp.Blocks` to create a form with an input field labeled "Enter name", an output field, and a "Run" button. It includes error handling for the `components` function.

Below the code, the rendered UI is visible, showing the "Enter name" input field, the "output" field, and the "Run" button.



# 5.2 CS Dashboard

The **CS Dashboard** serves as a powerful platform for users to manage their UI-related tasks efficiently. Its standout feature lies in the ability for users to quickly deploy their preferred versions, granting them the flexibility to personalize their UI experience based on their specific needs and preferences. Only the individual who developed the CS App has the authority to implement a new version. It's important to understand that, at any given time, only one version of the CS App can be deployed. This not only saves time and effort but also allows users to capitalize on the functionalities and design elements already available, enabling them to swiftly establish their desired configurations. The CS App can be deployed by accessing the CS Dashboard through the **'Apps Space'** interface, where users can click on it to initiate the deployment process.



The CS Dashboard provides a comprehensive display of details for the CS app.

The screenshot shows the ConverSight dashboard interface. At the top, there are navigation tabs: INSIGHTS (with a notification badge), STORYBOARD (with a notification badge), CONTROL TOWER, MARKET SPACE, and APPS SPACE. The user profile 'Athena' is visible in the top right. A search bar is located below the navigation. The main content area displays a table with the following columns: NAME, DESCRIPTION, LIBRARY, DEPLOYED VERSION, LEVEL, CREATED TIME, UPDATED TIME, and ACTION. The table contains several rows of data, with the last row highlighted in green.

NAME	DESCRIPTION	LIBRARY	DEPLOYED VERSION	LEVEL	CREATED TIME	UPDATED TIME	ACTION
status1	sample for csapp run status	sample	0.2	User	02-08-2024 06:27:21 pm	02-08-2024 06:27:53 pm	
status	sample for csapp run status	sample	0.1	User	02-08-2024 05:19:11 pm	02-08-2024 05:32:02 pm	
sample	This demo cs app is created for demo purposes	CSAppDemo	-	-	08-09-2023 05:29:31 pm		
New_UI_Testing	This demo cs app is created for demo purposes	CSAppDemo	0.1	Organization	08-09-2023 01:49:48 pm	08-09-2023 01:51:45 pm	
New_UI_Testing	Sample of CSS App	Sample	0.2	User	05-12-2023 03:18:11 pm		
CSApp_Run_Status	sample for csapp run status	sample	0.1	User	02-12-2024 10:40:17 am	04-15-2024 02:59:09 pm	

**Name:** This field showcases the name of the CS App, allowing for easy identification.

**Description:** The description field provides a concise overview of the CS App's functionalities, offering users a quick understanding of its capabilities.

**Library:** This field indicates the specific library where the CS App is stored, aiding in efficient organization and retrieval.

**Deployed Version:** The deployed version field indicates the specific version of the CS App that is currently active, ensuring users have visibility into the running instance.



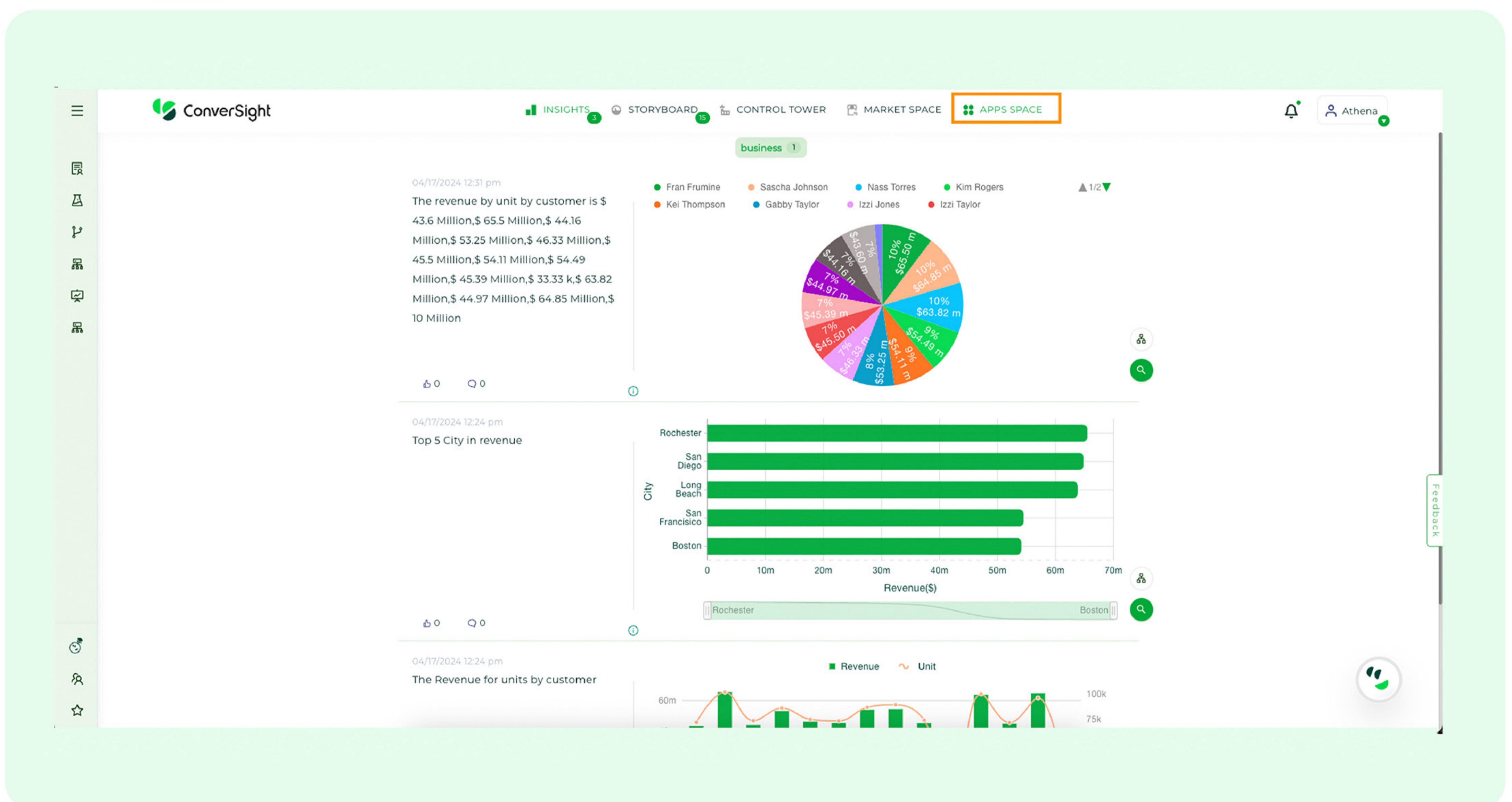
**Level:** The level field denotes the accessibility level of the CS App, which can be configured at different levels such as user, organization or platform. This granular control allows for precise management of app access based on roles and permissions.

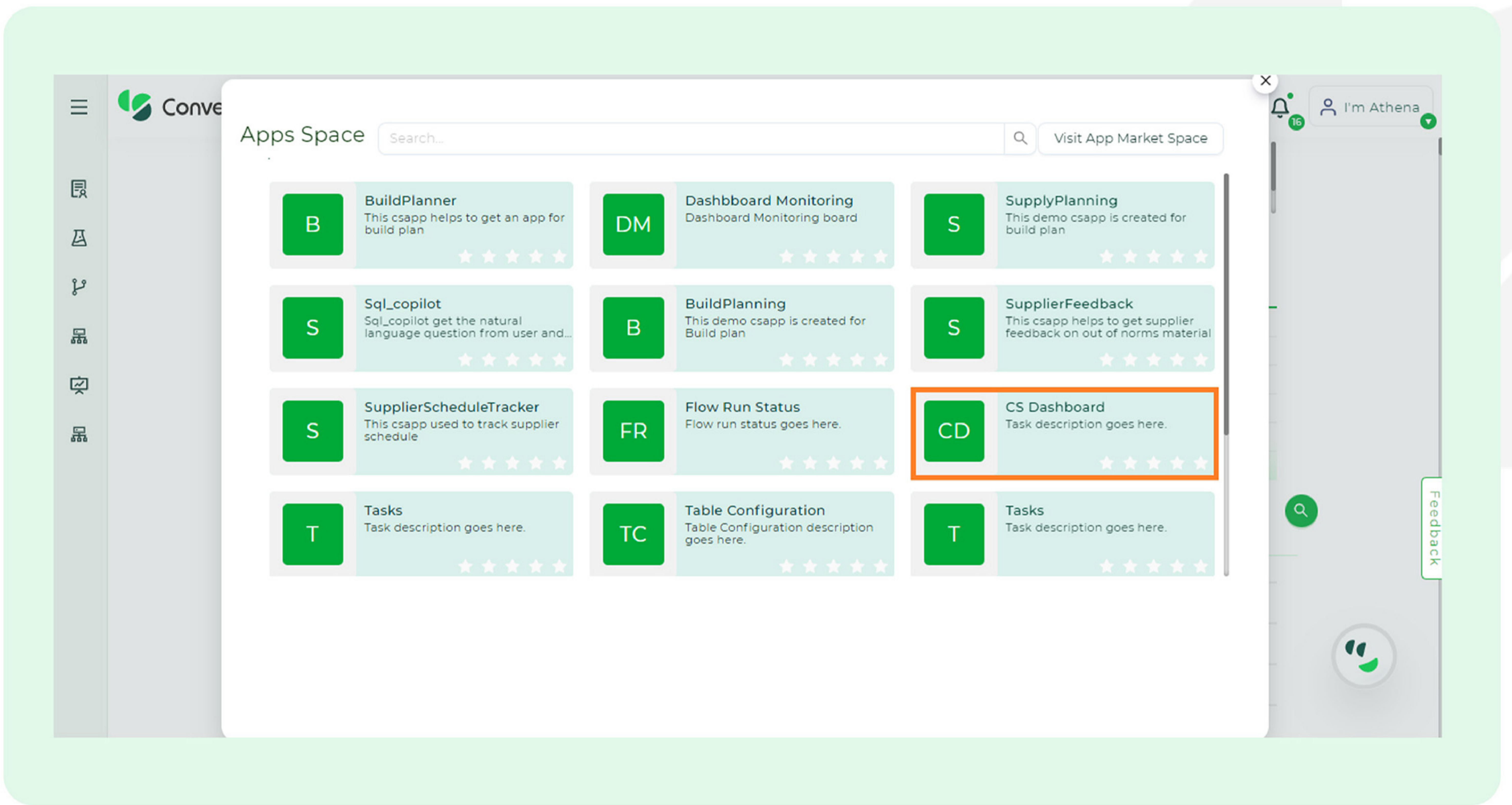
**Created and Updated Time:** These columns contain timestamps indicating the creation and most recent update of the CS App.

**Action:** The Action Field offers options for managing CS App versions and deleting the entire CS App.

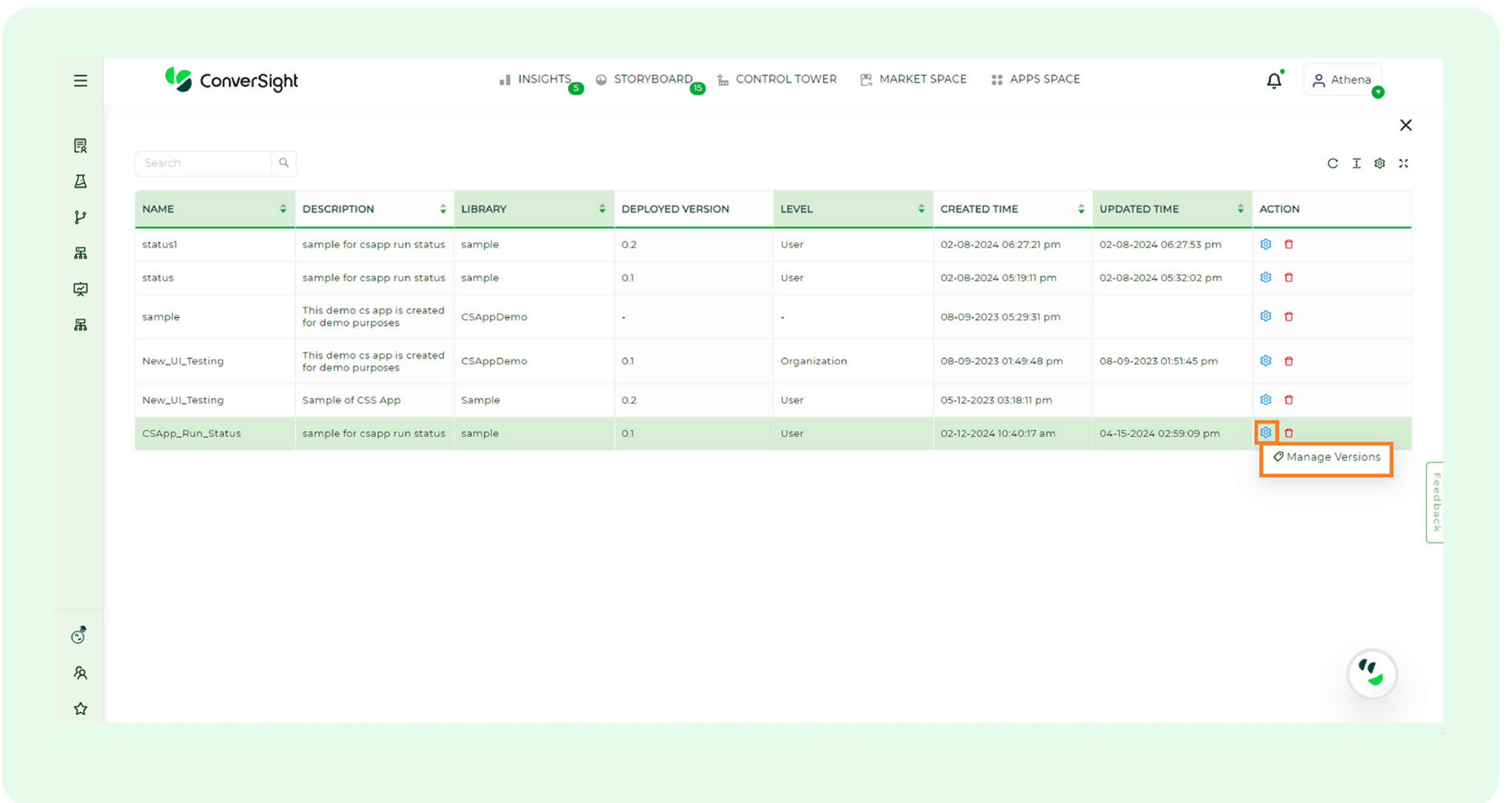
## 5.3 CS App Deployment

The CS App can be deployed by accessing the **'CS Dashboard'** through the **'Apps Space'** interface, where users can conveniently click on it to initiate the deployment process.

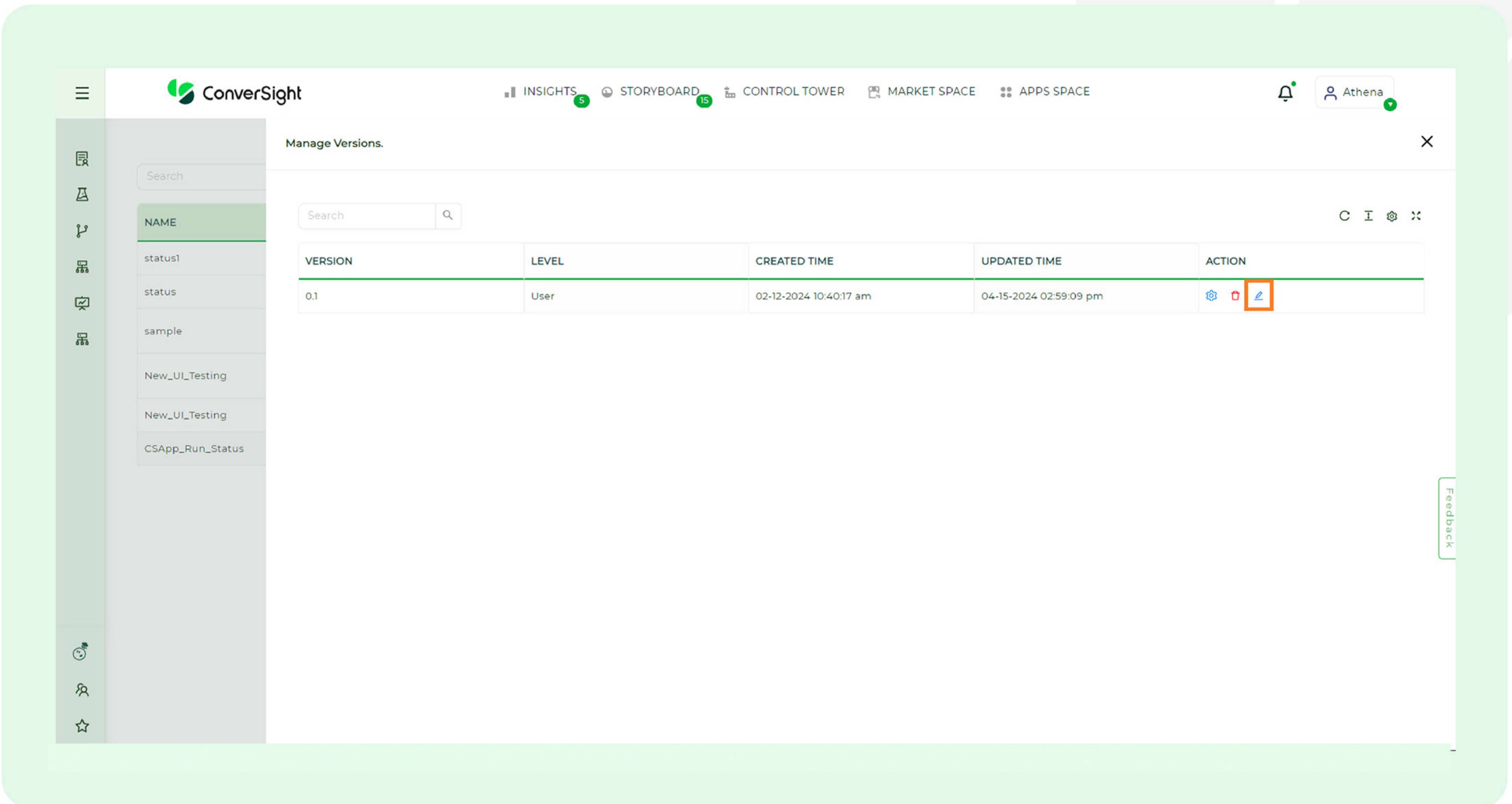




Select the **'Manage Versions'** option from the settings menu located within the **'Action'** column.

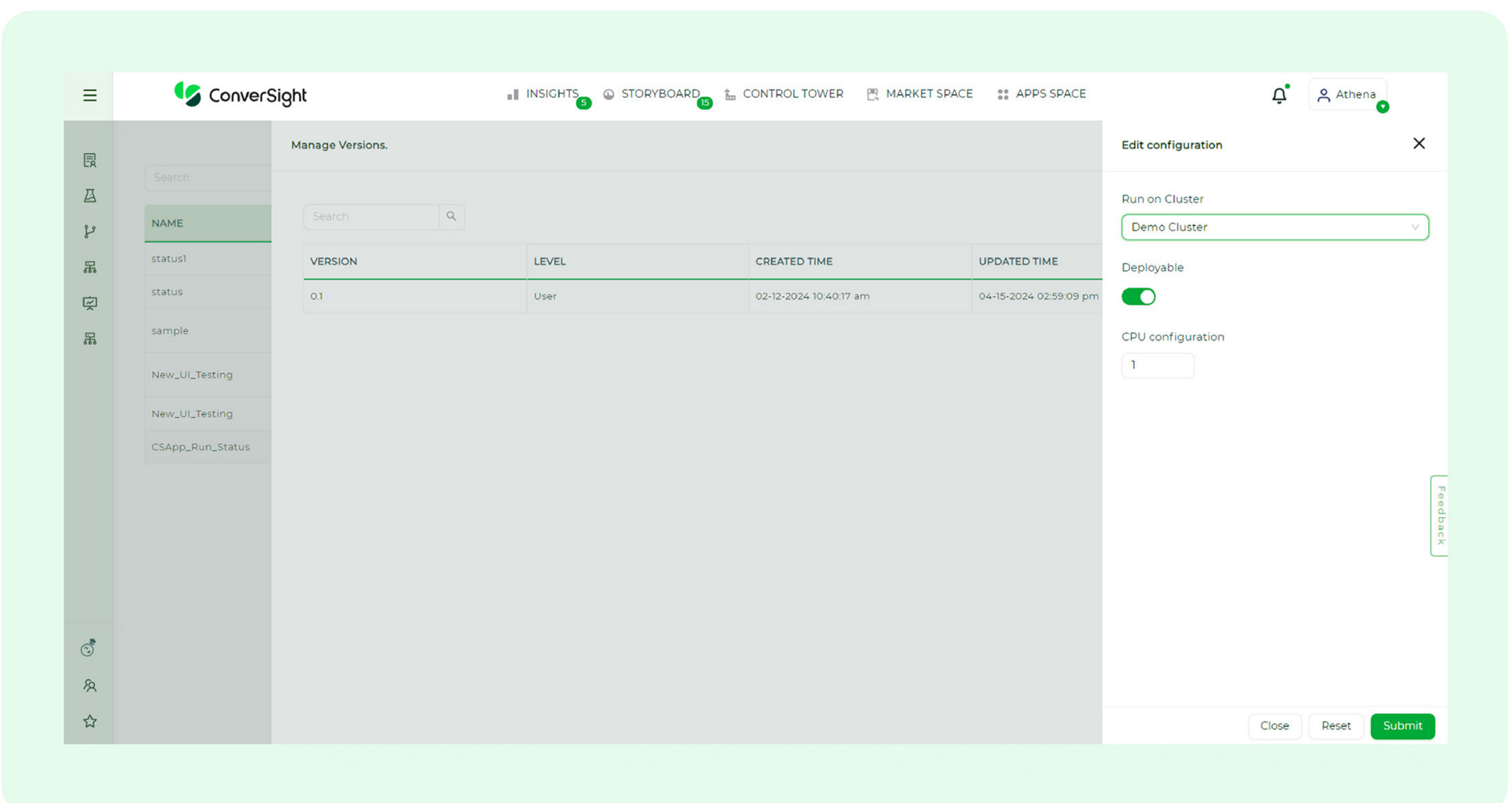


Within the Manage Versions page, click on the **'Edit'** icon under the Action Column.

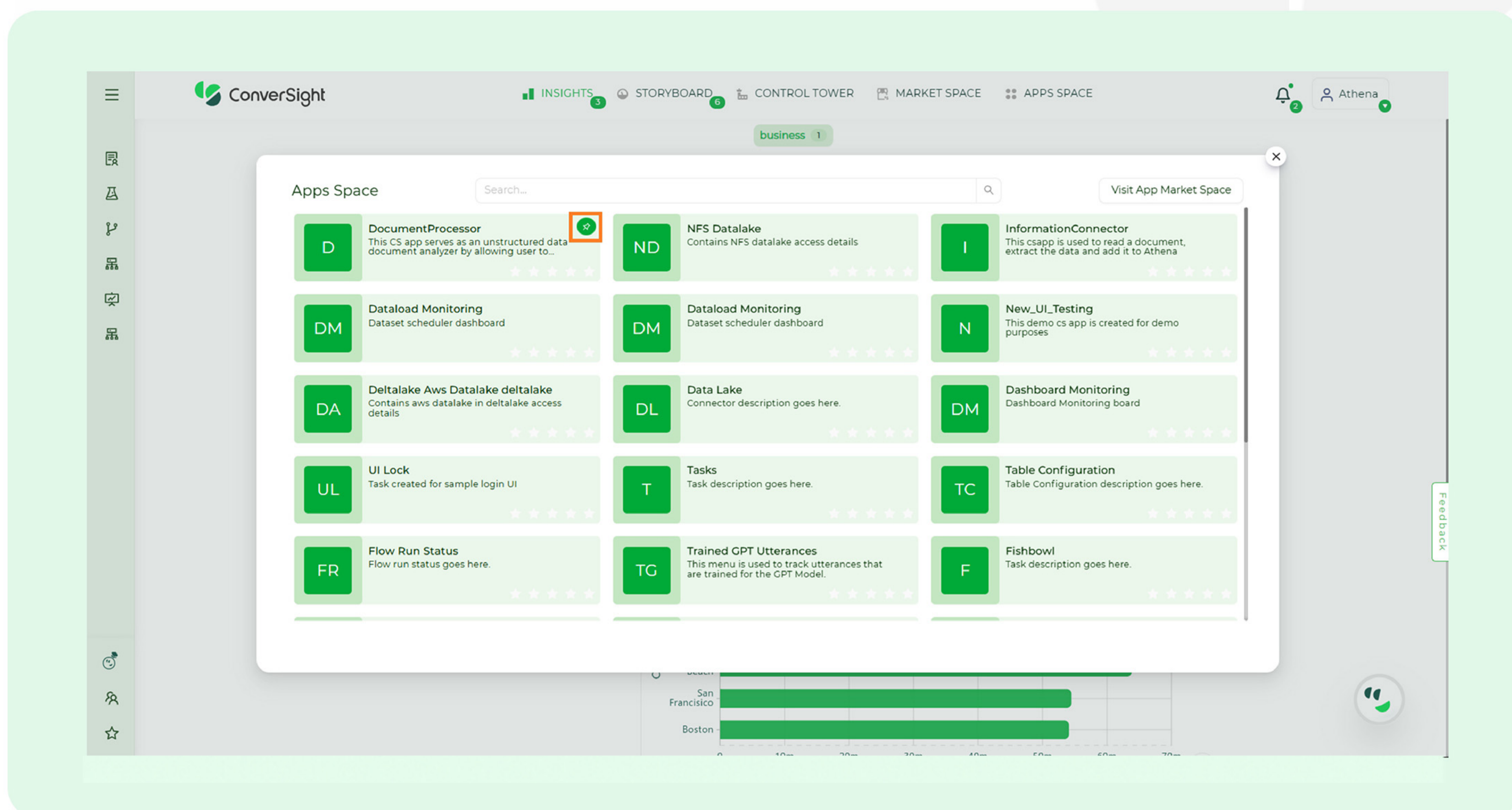


The Edit Configuration page offers users the flexibility to adjust the CPU (Central Processing Unit) core count for deploying their CS App. Additionally, users can utilize the **'Run-on Cluster'** feature, granting them the ability to select a specific cluster if they have subscribed to one. This feature enhances scalability and resource allocation, providing users with greater control over their CS App deployment.

Enabling or disabling the deployment of the CS App is effortless for users, as they can conveniently toggle the **'Deployable'** option.



Following the deployment of the CS App, users gain access through the Apps Space and have the option to conveniently 'Pin' it for future use.



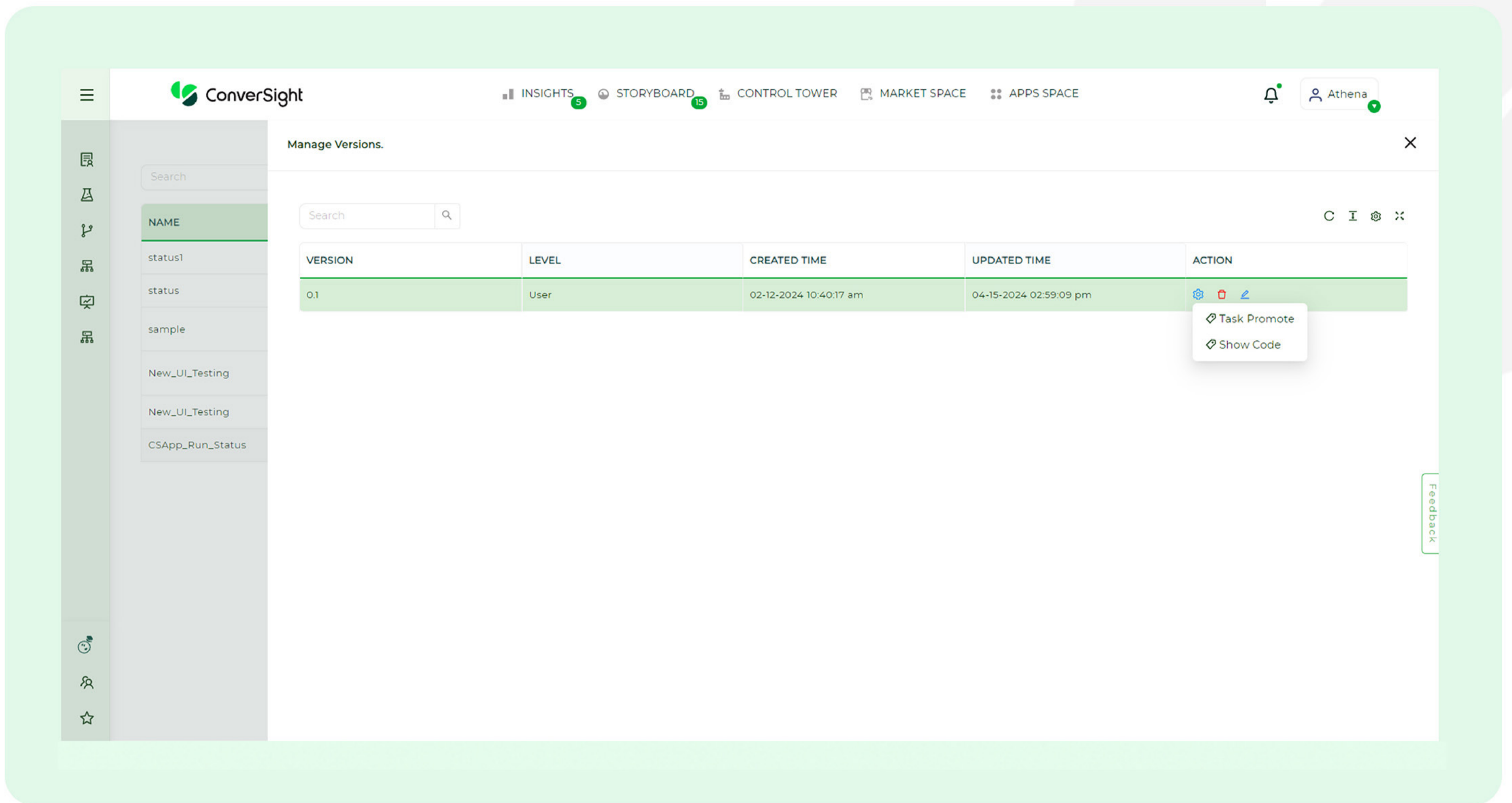
## 5.4 Manage Versions

In the Manage Versions page, users have the capability to efficiently manage various versions of the CS App. The version details are organized in a tabular format, providing comprehensive information such as the version number, level of access, deployment status as well as the time of creation and updates.

The CS App's creator has the authority to designate its version. Only one version of the CS App can be active at any given time, regardless of how many versions of the CS App are available.

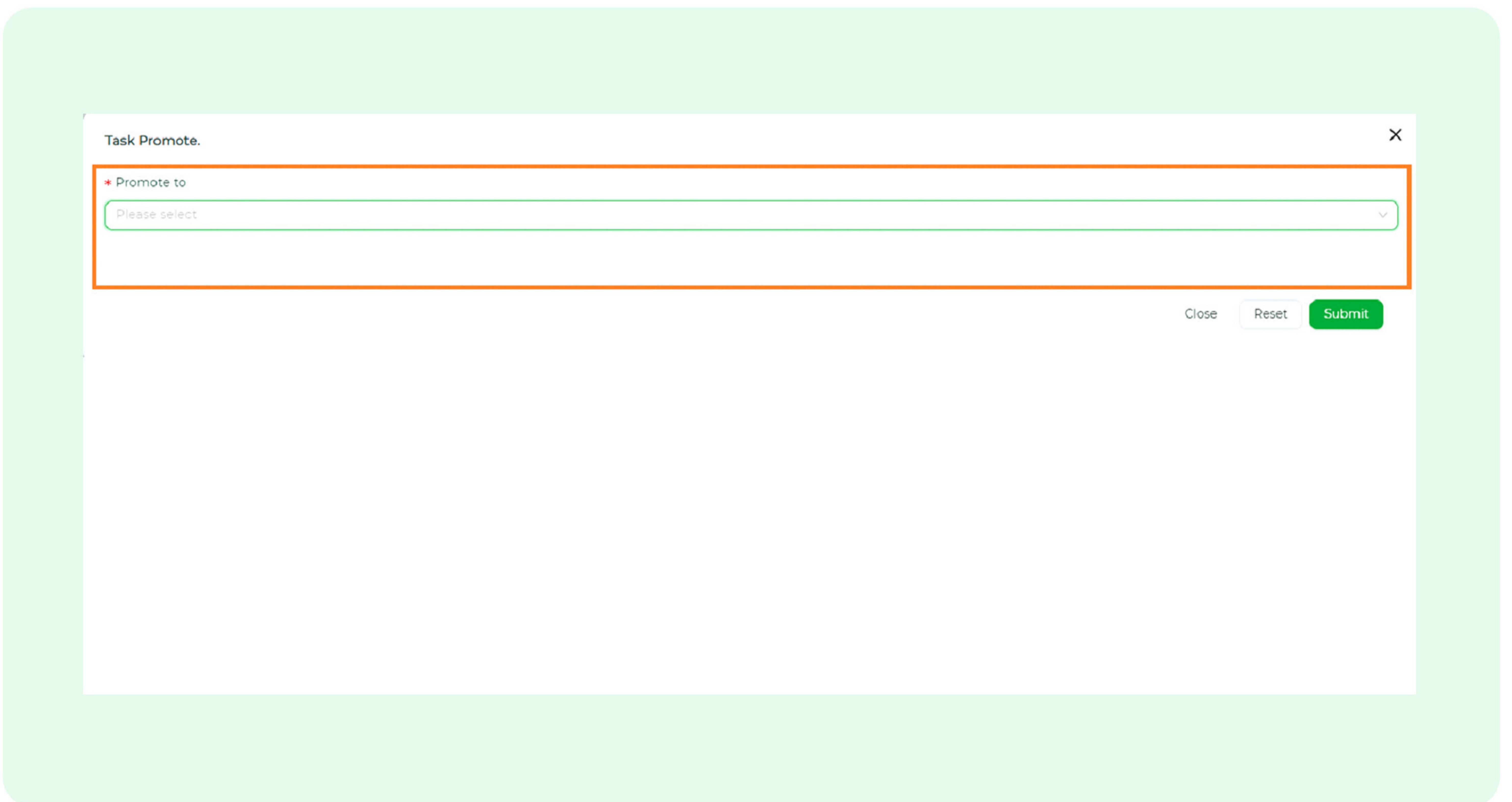
Within the table, users are presented with action fields offering a range of options, including:

- Task Promote
- Show Code



## Task Promote

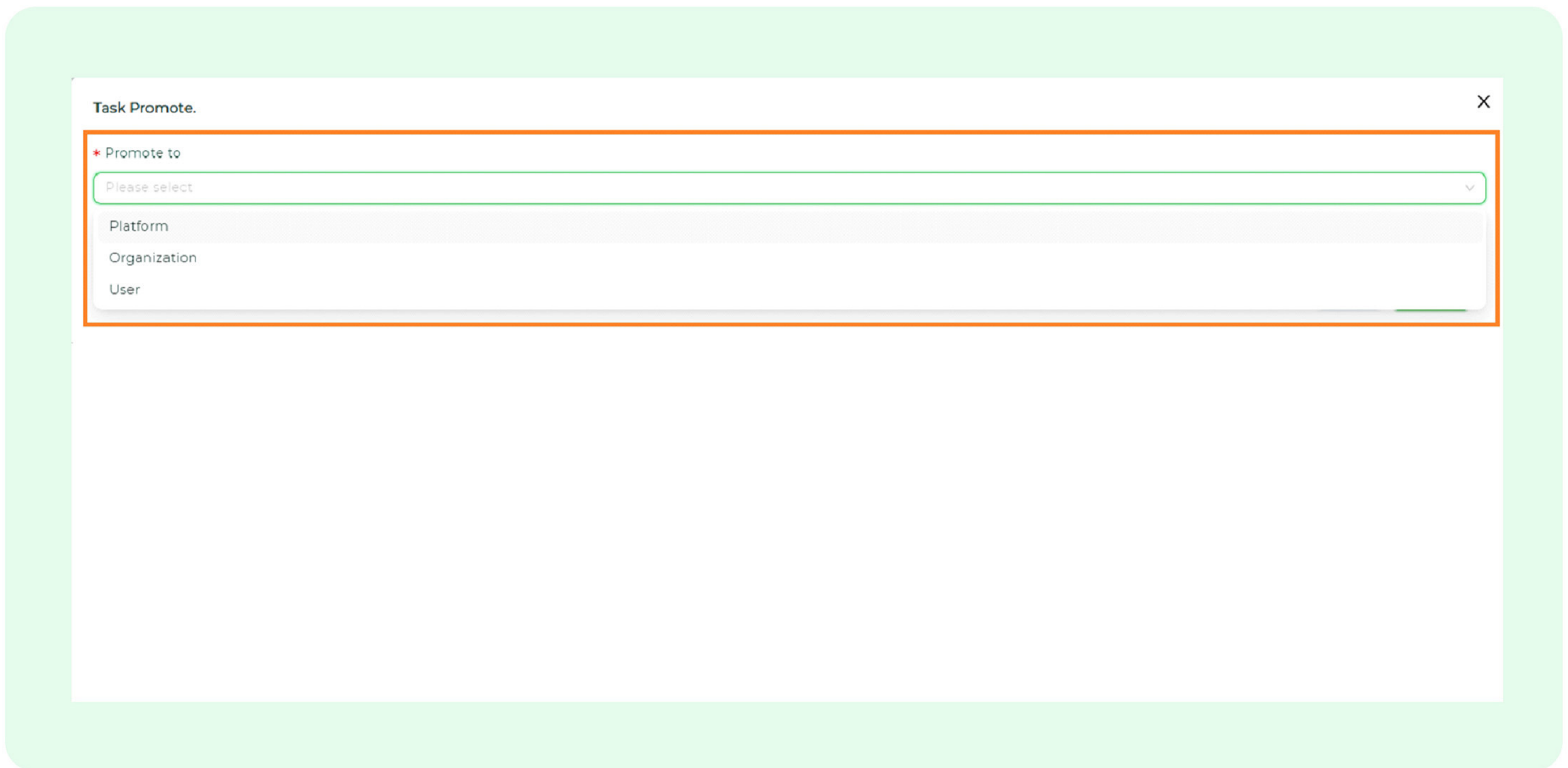
The **Task Promote** feature enables users to elevate the CS App version to their desired level-whether User, Organization or Platform-allowing them to customize access and visibility based on their specific requirements.



**Platform Level:** When a CS App version is promoted to the platform level, the associated tasks become accessible to all users across the entire platform.

**Organization Level:** When a CS App version is promoted to the organization level, the tasks associated with it become available to all users who belong to that specific organization.

**User Level:** At the user level, the promotion of a CS App version results in the tasks being available exclusively to the specific user. Unlike platform and organization levels, where tasks are accessible to multiple users, the user level ensures that the tasks are limited to the individual user who performed the promotion.



## Show Code

The **Show Code** option enables users to view the code of the CS App UI. The accessibility of this option depends on the access level granted during the app creation process.

There are three access levels that users can assign to the task while creating the task:

**View:** With the View access level, users can only view the code. This option is suitable for users who need read-only access to the task's code.

**Edit:** Users with the Edit access level have the privilege to modify and update the task's code. They can make changes to the code to enhance or customize the task according to their requirements.

**No Access:** When the No Access level is assigned, users will be restricted from accessing or editing the task's code. This option is commonly used for tasks that contain confidential functions and access is restricted to ensure data security and integrity.

```

Task code.
code
@UITask
def New_UI_Testing():
    """
    testing
    """
    try:
        from conversight import csAppBuilder as capp
        name = capp.Textbox(label="Name")
        output = capp.Textbox(label="Output Box")
        greet_btn = capp.Button("Hello Greet")
        greet_btn.click(fn=greet, inputs=name, outputs=output)
    except Exception as e:
        print(e)

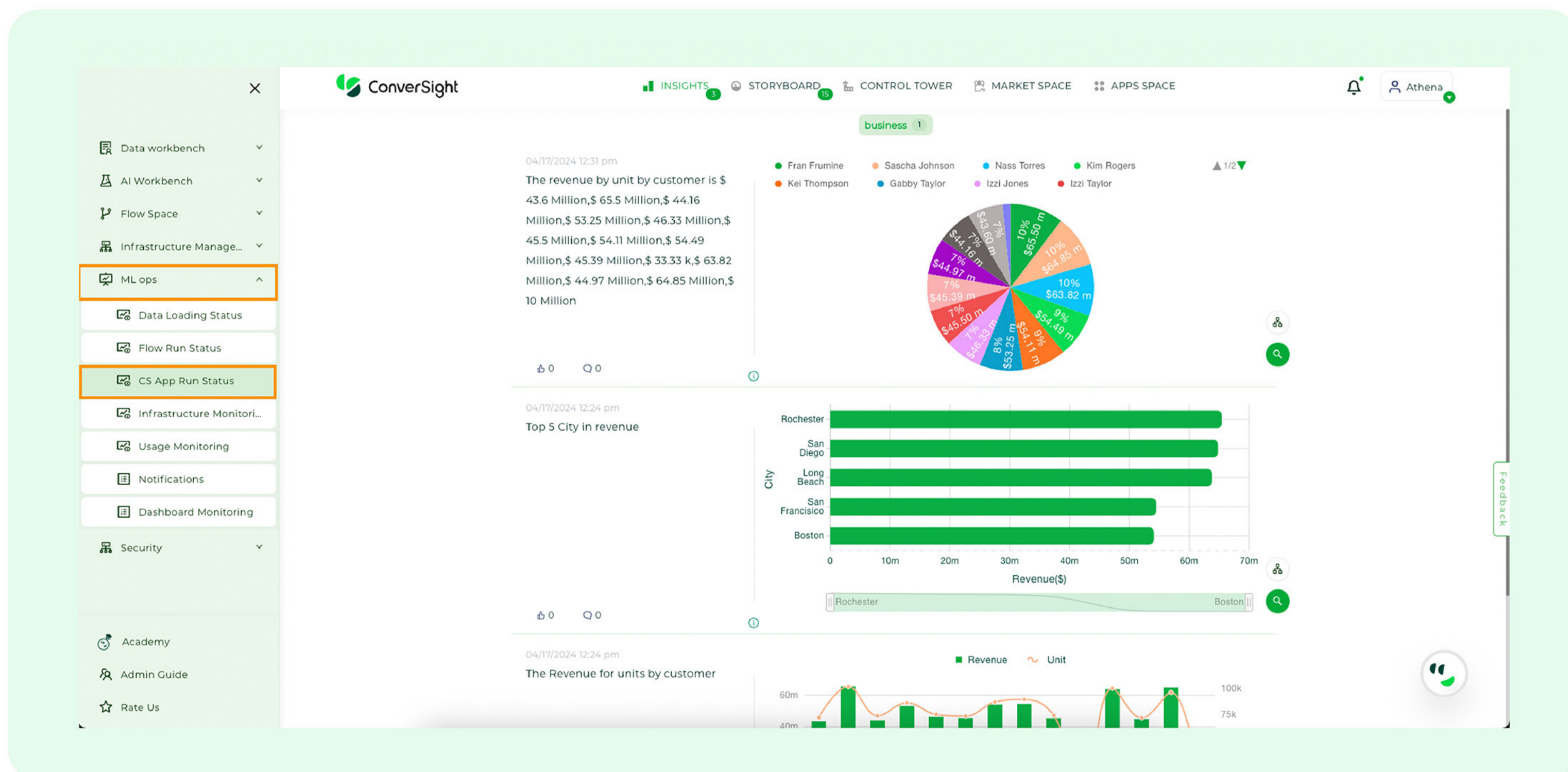
```

Close Reset Submit

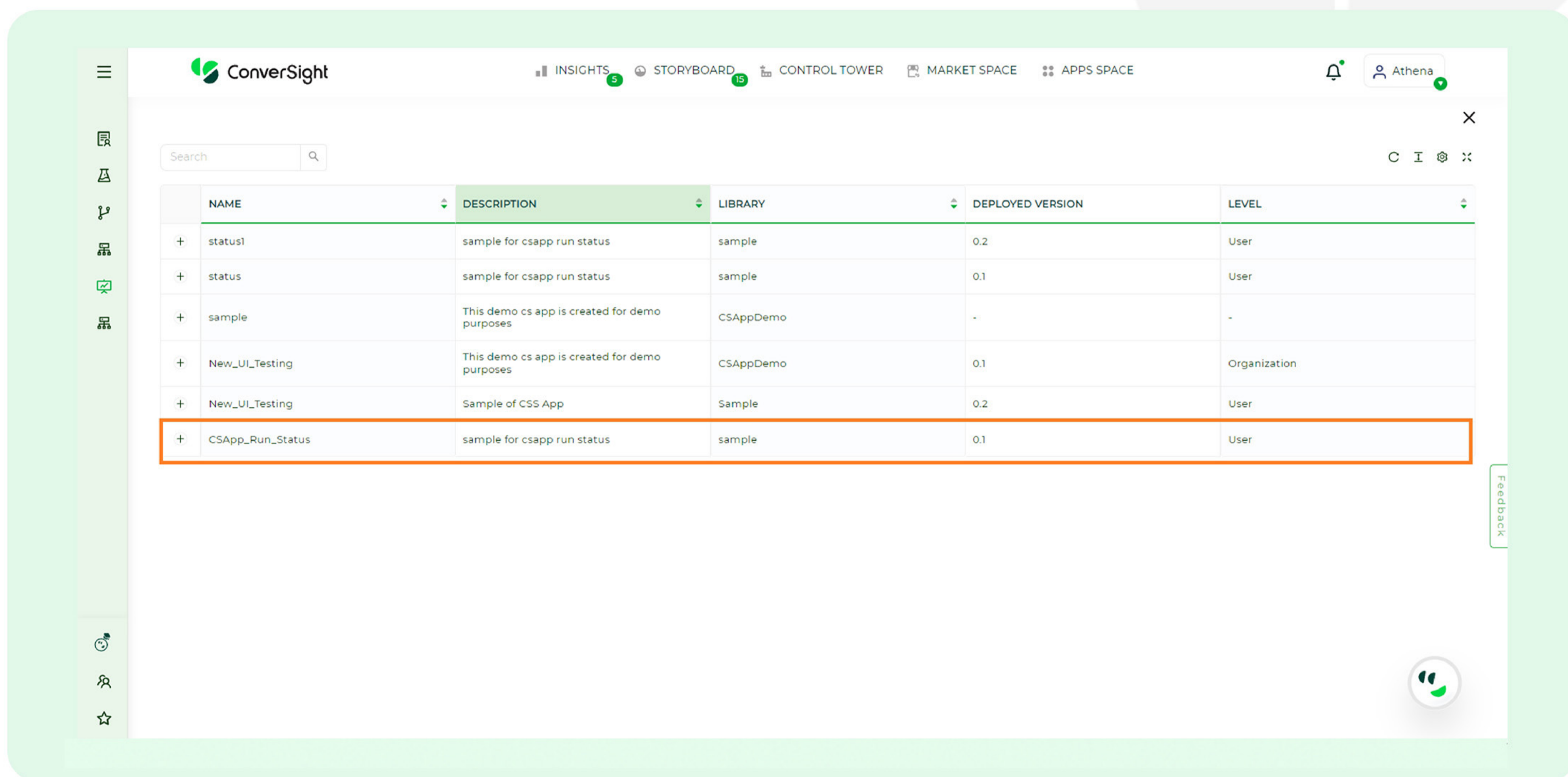
## 6. CS App Run Status

The **CS App Run Status** feature provides an intuitive and organized interface, with a table of comprehensive information about each CS App, simplifying monitoring and management tasks.

To access, select **'CS App Run Status'** under the **'ML Ops'** from configuration panel.



The table comprises essential details of the CS App, such as the name, description, library, deployed version and access level.



<b>Name</b>	Showcases the names of individual CS Apps, allowing easy identification and differentiation between apps within the ML Ops environment.
<b>Description</b>	Provides a succinct overview of each CS App's functionalities and purpose, enabling users to understand its core use cases and scope.
<b>Library</b>	Library Offers information about the library associated with the CS app, acting as a centralized location for storing reusable code and assets.
<b>Deployed Version</b>	Displays the currently deployed version of each CS App, ensuring users are working with the correct and most up-to-date iteration.
<b>Level of Visibility</b>	Defines app accessibility permissions, whether open to all users or limited to specific roles.





## 6.1 Monitoring CS App Activity

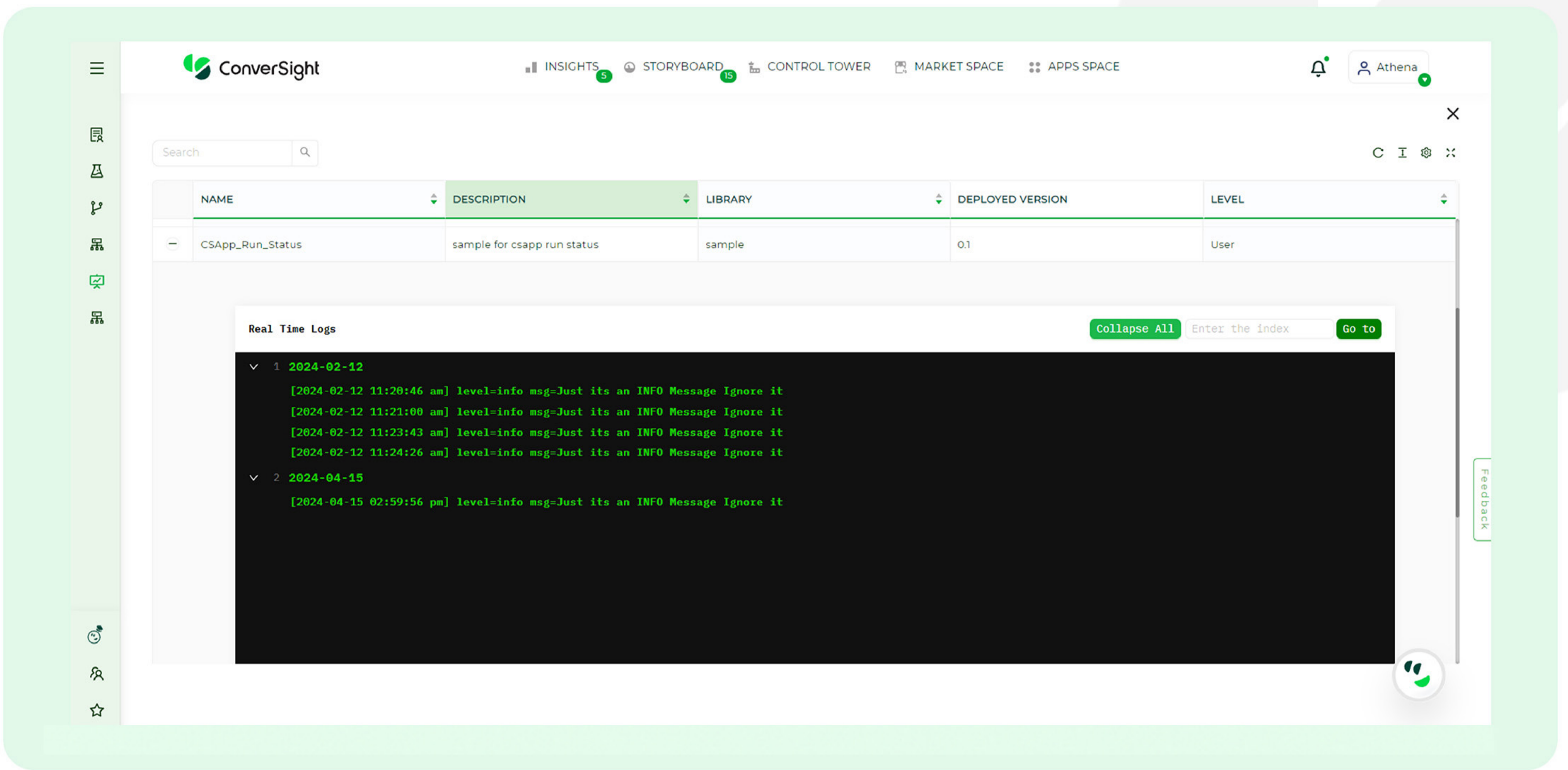
Tracking CS App activity allows you to continuously optimize and enhance the app's performance, resulting in improved user satisfaction and overall success of your enterprise. Checking the log in the CS App serves multiple purposes, including troubleshooting issues, ensuring app stability and gaining visibility into its behavior.

To review the log activity, simply click on the **'Plus'** icon. The logs are organized chronologically by date. By accessing the log messages of a CS App, you gain access to valuable information for troubleshooting and debugging. The log serves as a comprehensive record of the app's activities, capturing runtime behavior and highlighting errors, warnings and relevant events.

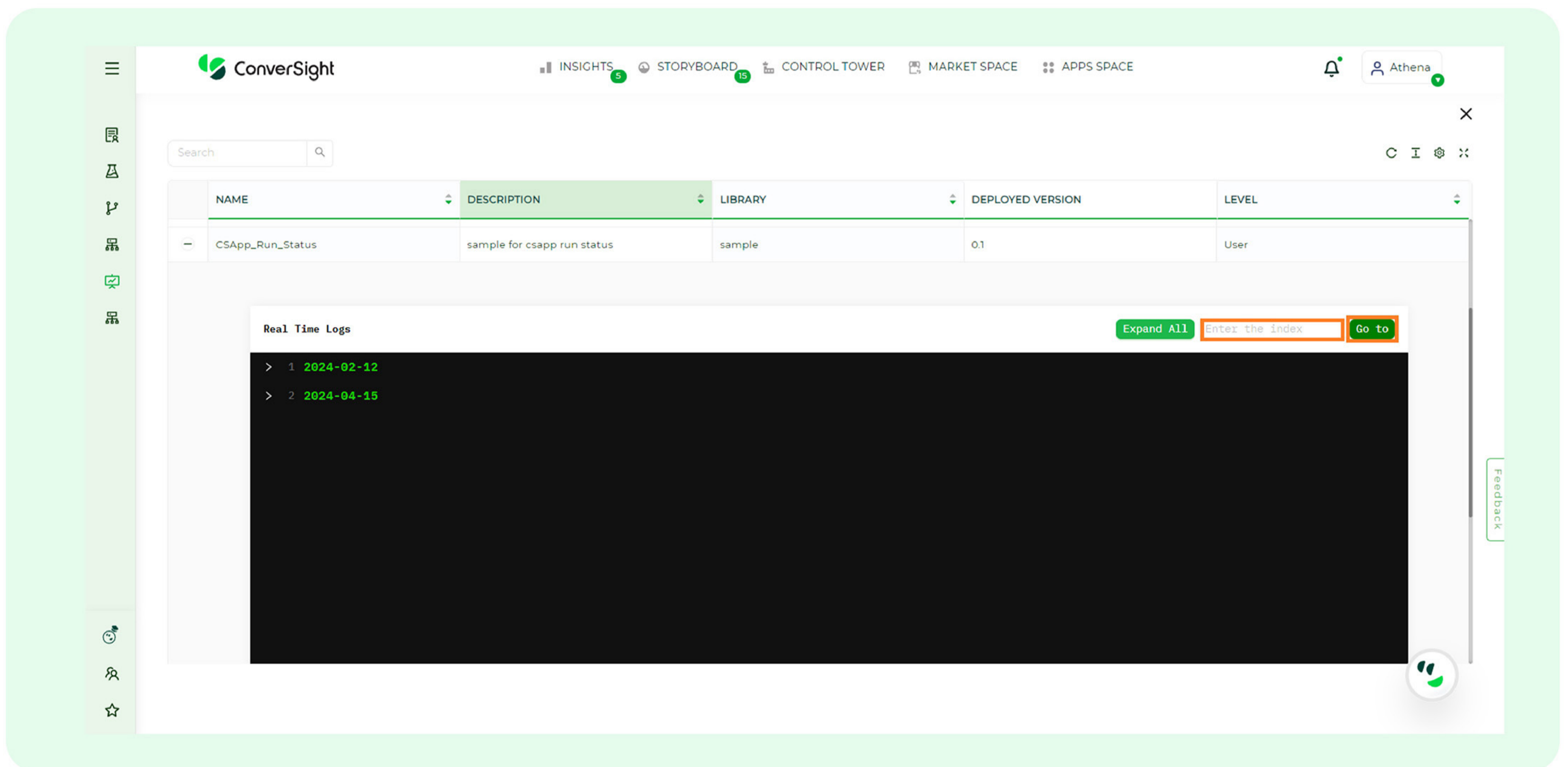
Users can click the **'Expand All'** button to view all the logs grouped by the timestamp, which indicates the time when the CS App was executed.

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NAME	DESCRIPTION	LIBRARY	DEPLOYED VERSION	LEVEL
+ status1	sample for csapp run status	sample	0.2	User
+ status	sample for csapp run status	sample	0.1	User
+ sample	This demo cs app is created for demo purposes	CSAppDemo	-	-
+ New_UI_Testing	This demo cs app is created for demo purposes	CSAppDemo	0.1	Organization
+ New_UI_Testing	Sample of CSS App	Sample	0.2	User
CSApp_Run_Status	sample for csapp run status	sample	0.1	User



To jump to a specific log, provide the index number and then click on the **'Go to'** button.



Reviewing these messages allows you to promptly identify and address any issues, ensuring smooth and efficient app operation. This insight empowers informed decisions and optimization of the CS App's functionality and performance.

## 7. The Potential of CS App

The CS App offers a wealth of potential in providing tailored user interfaces for business reports. With its powerful CS AppBuilder, businesses can harness a diverse range of customization tools, including dropdown menus and chat bots, to enhance the overall user experience.

The potential of the CS App can be summarized as follows:

The CS App empowers businesses to create personalized user interfaces for data presentation, enhancing user engagement and understanding.

Real-time monitoring and logging features facilitate continuous app performance improvement, ensuring stability and user satisfaction.

The optimization of resource allocation in the CS App is achievable through the selection of cluster-based execution, to enhance scalability and performance.

The CS Dashboard offers precise management of access levels, enabling users to define app interactions according to roles and permissions.

## 8. Conclusion

The CS App holds immense potential in revolutionizing the way organizations handle data, offering customized user interfaces that enhance the visual impact of business reports, market analysis and forecasts. With its tailored user interfaces, diverse customization tools, and adaptability, businesses can create engaging and user-friendly interfaces aligned with their unique needs. The CS Dashboard complements the app by efficiently managing UI tasks and version control, further enhancing the overall user experience. Together, the CS App and CS Dashboard transform data presentation, empowering organizations to harness and present their data effectively for maximum impact and success.

## Join our customers who have accelerated growth with ConverSight



### About ConverSight

ConverSight's Adaptive Analytics platform uses conversational AI, Natural Language Processing and machine learning to converge the distance between humans and data through data stories, presenting the meaning of data in the most effective, personalized and efficient form possible. ConverSight's patented AI business assistant, Athena, connects distributed databases to answer questions and Augment the consumers through 4 key functions: Information on demand, Automated Story Telling, Proactive Insights, and Recommended Actions.

For more information, visit [www.conversight.ai](http://www.conversight.ai)

