

# Jupyter-Enabled Proactive Insights

Drive Informed Decisions with ConverSight Proactive Insights in Jupyter Notebook.







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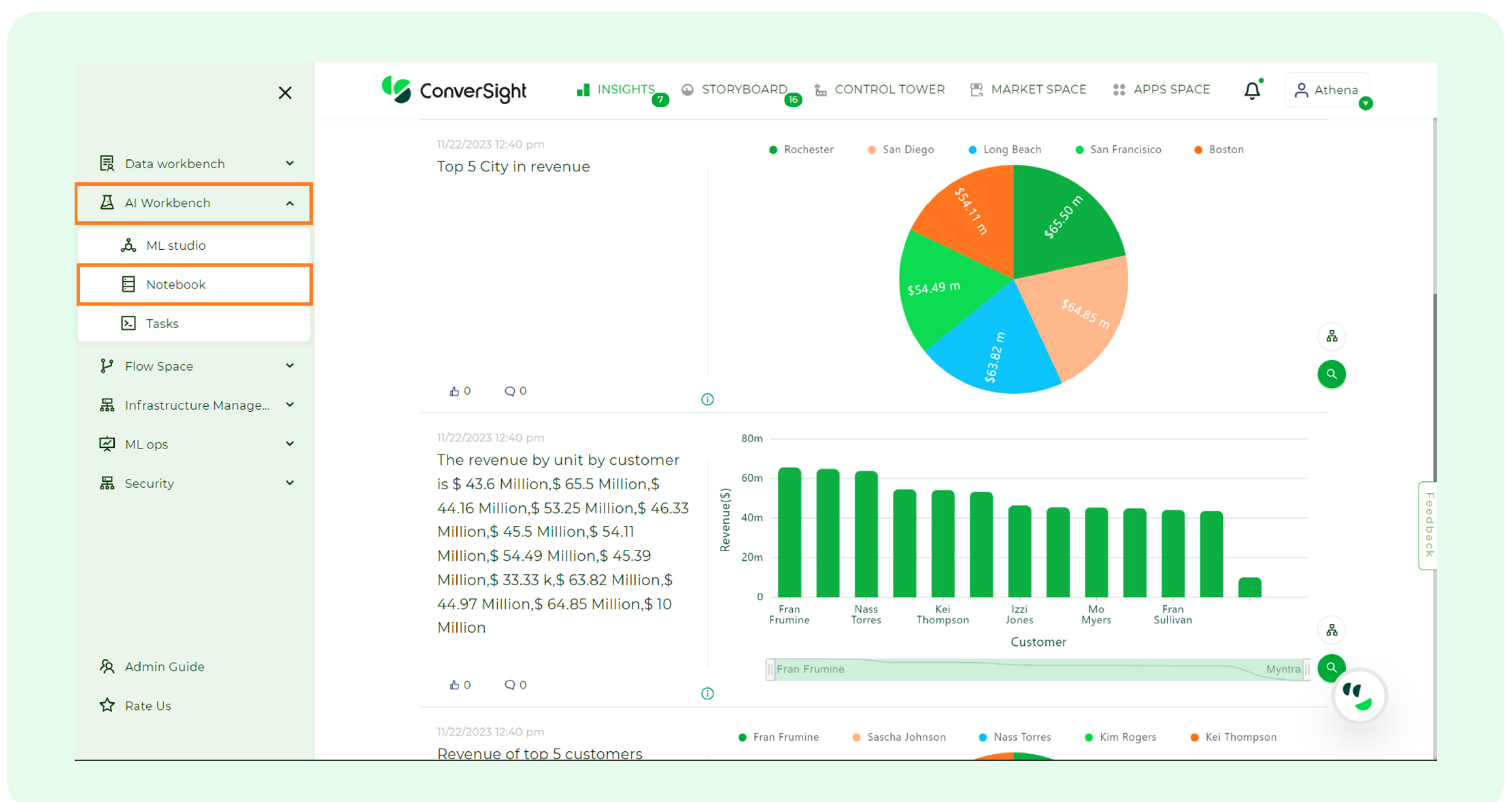
# I. Introduction

Proactive Insights entail the proactive pursuit and anticipation of critical information, aligning seamlessly with strategic problem-solving, data analysis and decision-making approaches. Utilizing ConverSight, users can efficiently generate, update and delete insights directly within the Jupyter Notebook environment. This streamlined process, embedded in a familiar setting, offers flexibility in customizing analyses, fostering transparency and ensuring reproducibility in data exploration. This datasheet explores the creation of a Proactive Insight in Jupyter Notebook, along with an in-depth examination of the various functions associated with Proactive Insights.

## 2. Accessing Jupyter Notebook in ConverSight

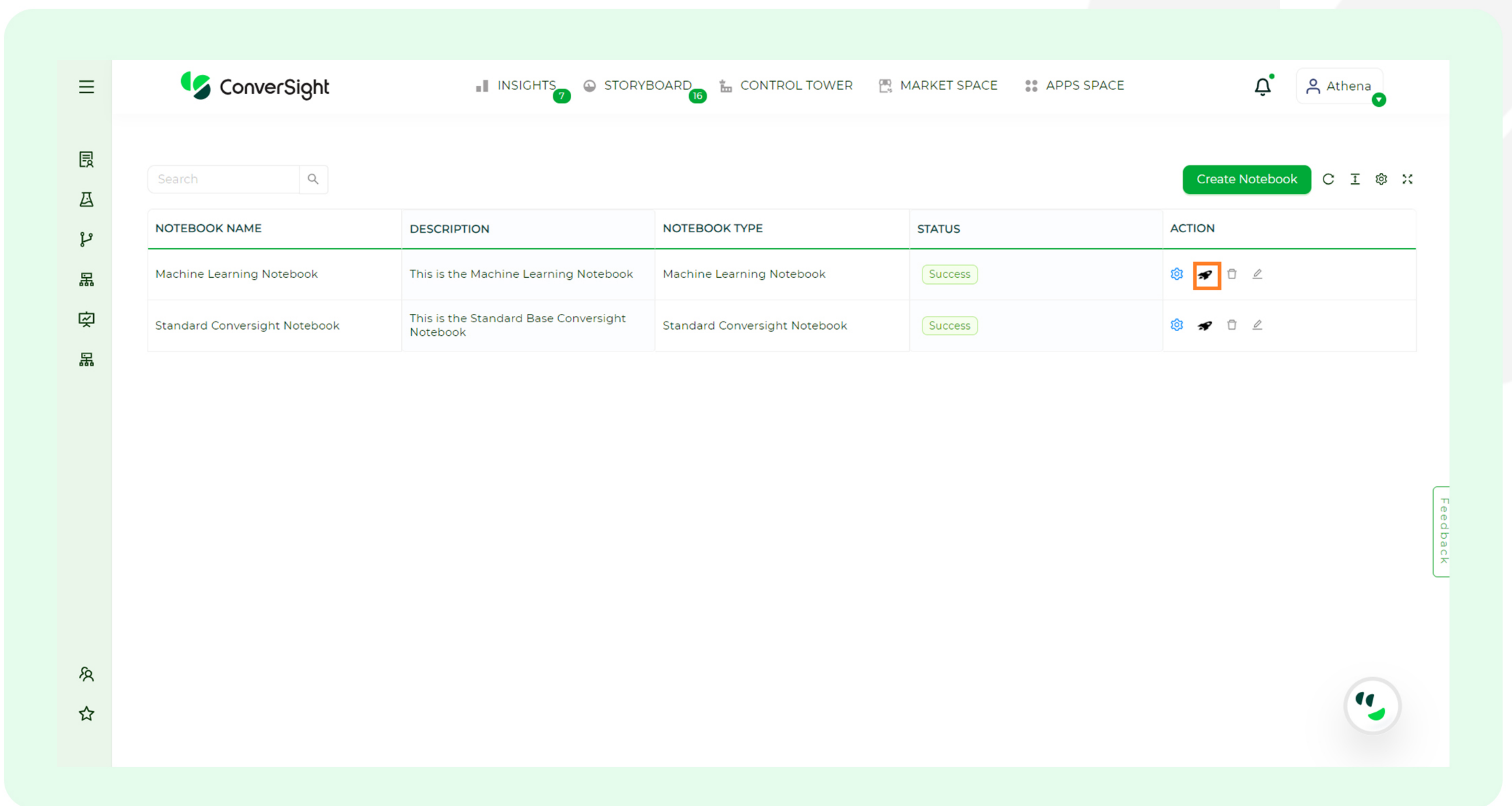
Jupyter Notebook, a robust and open-source web application, is widely employed in data science, scientific computing and machine learning. Now, let's explore the procedures for accessing Notebooks within the ConverSight platform.

- 🚀 To access Notebook in the ConverSight platform, navigate to the Configuration section and choose **'Notebook'** under **'AI Workbench'**.

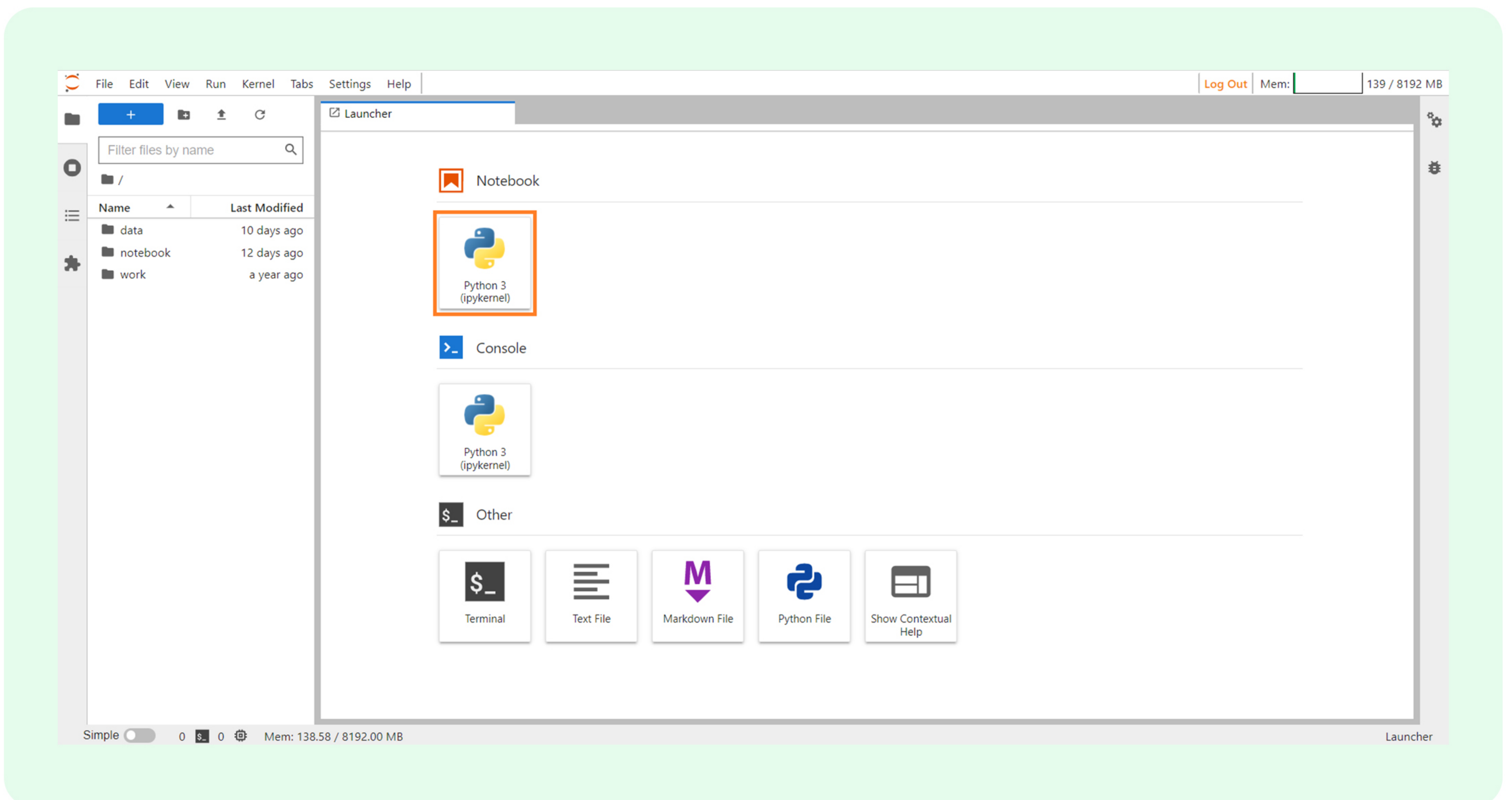


- 🚀 By default, ConverSight provides two types of Notebooks: The Machine Learning Notebook and the Standard ConverSight Notebook. To launch a Notebook, simply click on the **'Rocket'** icon of the respective Notebook.





Upon initiating a Notebook instance, Jupyter Hub subsequently validates your access and displays a list of accessible Notebooks in case of multiple permissions. Click on the **'Python 3'** Notebook.





### 3. Functions in Proactive Insights

To create and interact with Proactive Insights, importing the Proactive Insights module from the `conversight` library is essential. Users can perform diverse operations, including the creation and management of proactive insights. These functions provide a versatile toolkit for managing insights, ensuring a dynamic and interactive experience within the Jupyter environment.

```
from conversight import ProactiveInsights
```

#### 3.1 Create Insights

To initiate the creation of insights, start by accessing the dataset using its unique **'datasetID'**. Then, initialize the `ProactiveInsights` module by utilizing the **'ProactiveInsights'** class.

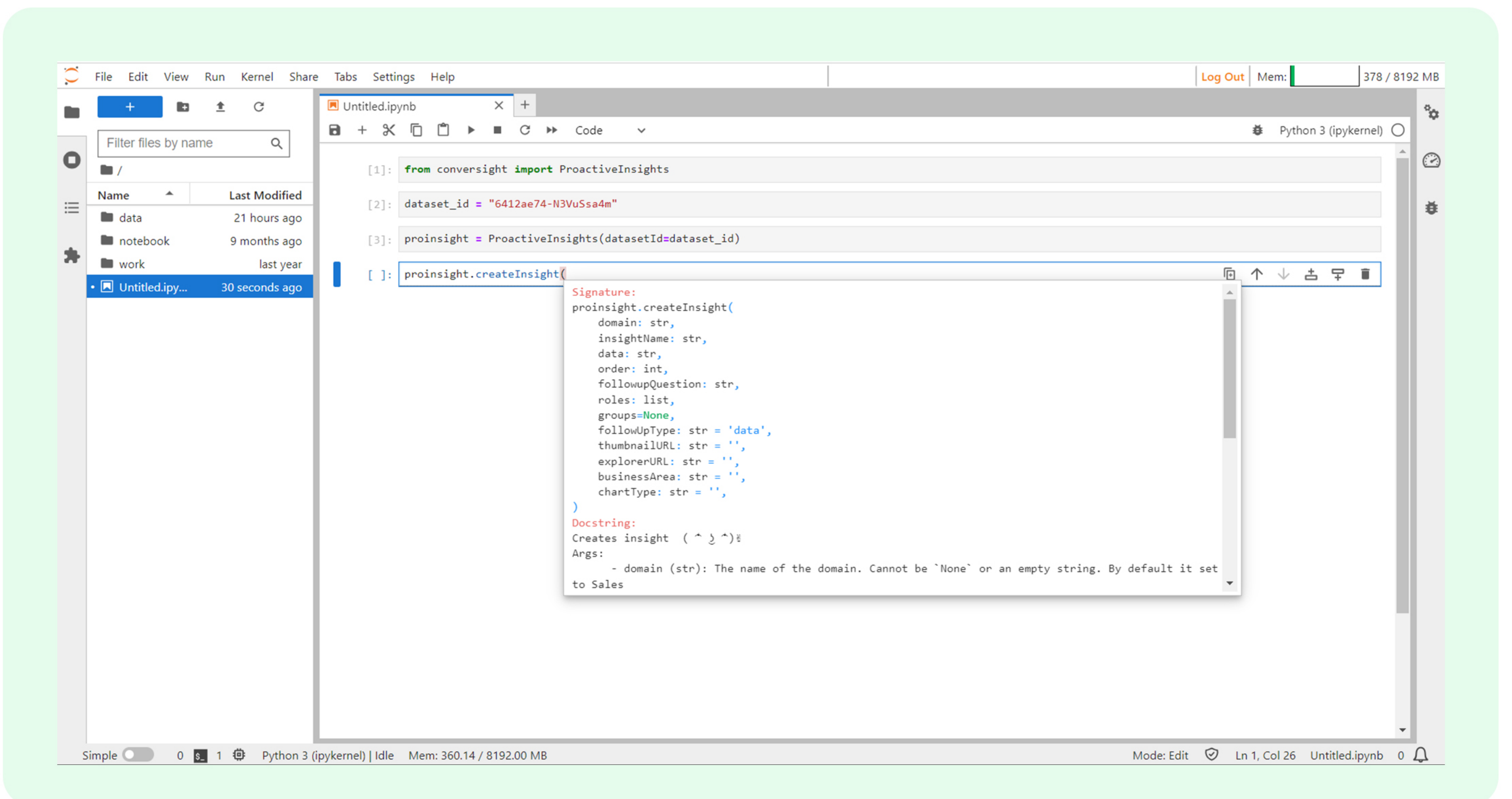
```
DatasetID = "DatasetID"  
Insight_object = ProcactiveInsights(datasetId=DatasetID)
```

Once initialized, employ the **'createInsight'** function from the `ProactiveInsights` module to generate the desired insights. This streamlined process ensures a systematic approach to crafting proactive insights within the Jupyter Notebook environment in ConverSight platform. The generated Insight will be visible on the Insights page in the ConverSight platform.

Arguments	Description
<b>domain</b>	To create the insight, input the domain of the dataset.
<b>insightName</b>	Provide a name for your Insight.
<b>data</b>	Data is essential for the Insight to form a response and without it, the creation of the Insight will not occur.
<b>order</b>	Order determines the display sequence of the insight and its default value is set to 1. Notably, the order cannot be set to zero.
<b>followupQuestion</b>	To address potential inquiries arising from the insights' output, input a Follow-up Question, which is necessary for viewing follow-up information; without provided data, there won't be any follow-up displayed.



<b>roles</b>	To display the insight for a specific secured role, you must include a list of role IDs. Providing 'None' or an empty list of strings is not permissible.
<b>groups</b>	To grant access to the insight for a specific secured group, you must include a list of group IDs. Providing ' <b>None</b> ' or an empty list of strings is not allowed.
<b>followUpType</b>	The default display for follow-up data is in its data form. If desired, you can switch to presenting it as a URL by adjusting the setting to URL.
<b>thumbnail URL</b>	The thumbnail URL is utilized to view the data with a specified name. By default, it is set to an empty string. For Example, <b>http://seemydata.com</b> can be assigned to thumbnail URL.
<b>explorer URL</b>	The Explorer URL, by default, is an empty string and is employed to view the data in a separate window.
<b>businessArea</b>	By default, the display of data to a particular business group is set to an empty string.
<b>chartType</b>	To visualize the data in a specified chart, if the chart type is applicable based on the data, by default chartType is set to an empty string.





```

[1]: from conversight import ProactiveInsights
[2]: dataset_id = "6412ae74-N3VuSsa4m"
[3]: proinsight = ProactiveInsights(datasetId=dataset_id)
[4]: proinsight.createInsight(domain="Sales",insightName="SAMPLE",data="proactive insights",order=1,
followupQuestion="Revenue by month",roles=["*"], chartTy
[2023-12-05 04:46:55,438] [INFO] ***** Creating proactive insight *****
[2023-12-05 04:46:57,642] [INFO] proactive insight created successfully !!
[4]: {'status': 'success', 'message': 'proactive insight created successfully'}
[5]: proinsight.getInsights()

```

S.No	Insight Name	Data Text	Insight Id	Followup Question	Roles	Groups	Updated Time
1			0102c84e-4849-48d8-b51d-c5c485056780	revenue by City	["*"]	["*"]	2023-05-04 05:46:14+00:00
2			e6f3eb24-a4fc-4576-a99b-73be8a0bc123	Top 5 customers by revenue	["*"]	["*"]	2023-05-09 09:29:22+00:00
3			e6569055-5bff-4070-9207-66270e2444e9	revenue by month	["*"]	["*"]	2023-05-23 07:08:44+00:00
4			71b9a60e-96f1-40a1-87cc-7ba5d475e20c	revenue by year	["*"]	["*"]	2023-09-12 09:46:46+00:00
5			eab2fea0-89ac-4966-9932-af8f5aa9b23d	Top 5 City by revenue	["*"]	["*"]	2023-05-09 11:01:17+00:00
6			829b57e6-4cab-4ec9-9467-3c5f5450c6c8	revenue by month	["*"]	["*"]	2023-05-23 07:11:32+00:00
7			fdb4121a-e686-4b63-a156-cb3668a0c68f	revenue by unit by customer	["*"]	["*"]	2023-09-12 09:49:42+00:00
8			c6702f38-8ad0-4cbf-83b7-02936f5611f5	Revenue by customer	["*"]	["*"]	2023-09-26 04:41:05+00:00
9			4486443f-af4d-4a57-992f-8fb8cebdc848	revenue by month	["*"]	["*"]	2023-12-04 04:53:51+00:00
10	SAMPLE	proactive insights	03ac992c-c61e-462d-8dd8-52aac2111431	Revenue by month	["*"]	["*"]	2023-12-05 04:46:55+00:00
11			efdaabdc-5be1-4c56-ba4b-c6d4dd18df74	revenue by City	["*"]	["*"]	2023-05-04 05:43:44+00:00

## Note

By pressing Shift + Tab, you can view detailed information about the arguments needed in the functions, including their respective data types.

## 3.2 Viewing Insight

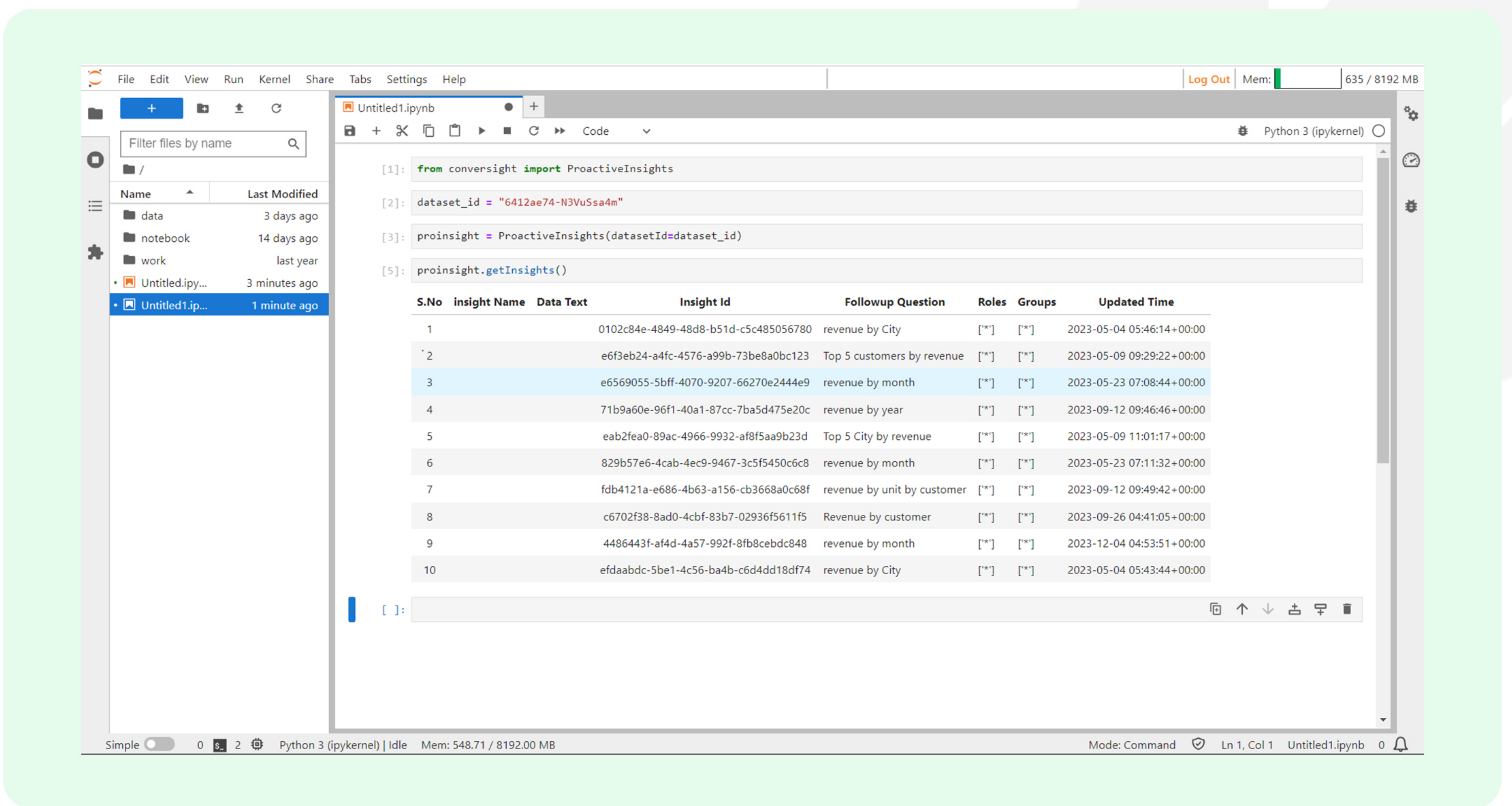
By leveraging the distinctive Dataset ID associated with a dataset, users can retrieve the detailed information of the Insight specific to that dataset. This functionality allows users to gain understanding about the corresponding insights the dataset holds.

### 3.2.1 Get Insights

The **'getInsights'** function empowers users to acquire a comprehensive array of insights associated with the specified dataset, offering a holistic perspective. This functionality goes beyond by retrieving detailed information, including the Insight Name, Insight ID, follow-up Question, Roles, Groups and the Last Updated time for each insight. This comprehensive view allows users to delve into specific insights and their associated details, enhancing the depth of understanding and analysis.

**Insight\_variable.getInsight()**





### 3.2.2 Get Insights as JSON

The functionality of **'getInsightsAsJson'** allows users to fetch a compilation of insights linked to the designated dataset in JSON format. Expanding its capabilities, this feature includes detailed information such as the Insight's active state, Domain Name, Chart type utilized, SQL representation of the Insight Query, creation timestamp, last update timestamp, creator details, updater details, follow-up questions and more. This comprehensive functionality empowers users to explore specific insights and their related details, augmenting the depth of comprehension and analytical capabilities.

#### **Insight\_variable.getInsightsAsJson()**



```

[1]: from conversight import ProactiveInsights
[2]: dataset_id = "6412ae74-N3VuSsa4m"
[3]: proinsight = ProactiveInsights(datasetId=dataset_id)
[4]: insight_data = proinsight.getInsightsAsJson()
[5]: insight_data

[5]: [{"isProActive": False,
      "insightName": "",
      "_key": "0102c84e-4849-48d8-b51d-c5c485056780",
      "answer": "",
      "dataSetID": "6412ae74-N3VuSsa4m",
      "domainName": "Sales",
      "businessArea": "",
      "chartType": "",
      "id": "0102c84e-4849-48d8-b51d-c5c485056780",
      "inference": "@revenue >0",
      "inferenceQuery": "'label_RetailSales.revenue' >0",
      "inferenceType": "",
      "inferencePipeline": None,
      "question": "revenue",
      "sqlForm": "SELECT round(sum(coalesce(subquery.\"label_RetailSales.revenue\", 0)), 2) AS \"label_RetailSales.revenue\" \nFROM (SELECT round(sum(coalesce\n(@RetailSales.revenue, 0)), 2) AS \"label_RetailSales.revenue\" \nFROM (#)RetailSales) AS subquery",
      "template": "The revenue on sales is @revenue",
      "advancedTemplate": "",
      "createdAt": "2023-05-04T05:46:14Z",
      "updatedAt": "2023-05-04T05:46:14Z",
      "createdBy": "77378b1b-5cfb-497c-b4ac-a1a0e4922430",
      "updatedBy": "77378b1b-5cfb-497c-b4ac-a1a0e4922430",
      "roles": ["*"],
      "groups": ["*"],
      "category": ["web", "mobile", "controlTower"],
      "metaData": {"revenue": {"additional_data": {"precision": 2},
      "alias": "revenue",
  
```

### 3.2.3 Get Insights And Components

The **'getInsightsAndComponents'** function allows users to retrieve a comprehensive set of insights, including their associated components, of a specific dataset. These components encapsulate insights limited to specific user groups. Depending on the user's assigned groups and roles, personalized insights components are generated and notifications are sent to the user's associated role group. This feature enhances user engagement by delivering targeted insights based on their specific roles and group affiliations, ensuring a customized and efficient data exploration experience.

#### Insights\_variable.getInsightsAndComponents()

```

[1]: from conversight import ProactiveInsights
[2]: dataset_id = "6412ae74-N3VuSsa4m"
[3]: proinsight = ProactiveInsights(datasetId=dataset_id)
[9]: insight_component_data_json = proinsight.getInsightsAndComponents()

```

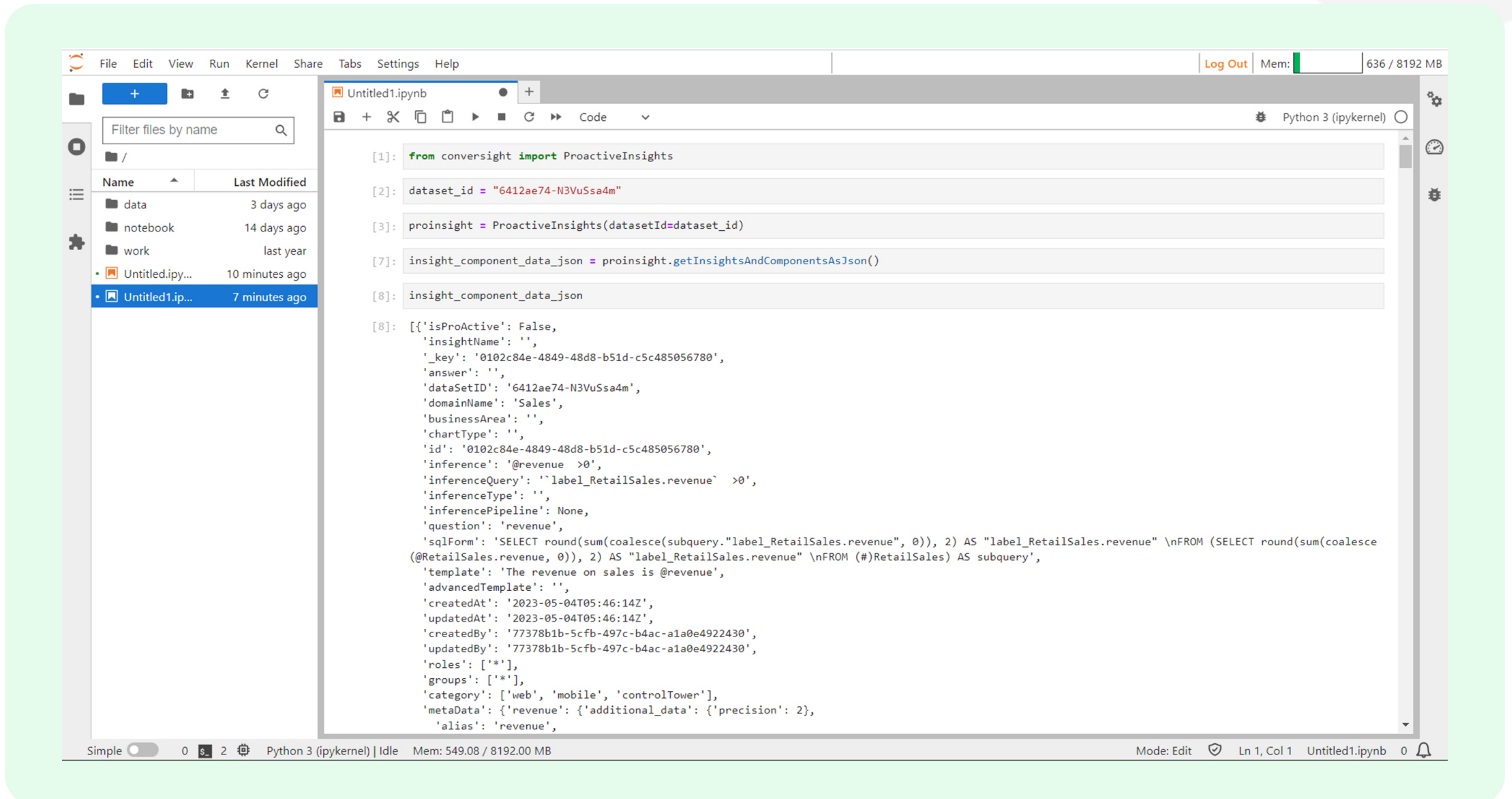
S.No	insight Name	Data Text	Insight Id	Followup Question	Roles	Groups
1		0102c84e-4849-48d8-b51d-c5c485056780	revenue by City	revenue by City	["*"]	["*"]
2		e6f3eb24-a4fc-4576-a99b-73be8a0bc123	Top 5 customers by revenue	Top 5 customers by revenue	["*"]	["*"]
3		e6569055-5bff-4070-9207-66270e2444e9	revenue by month	revenue by month	["*"]	["*"]
4		71b9a60e-96f1-40a1-87cc-7ba5d475e20c	revenue by year	revenue by year	["*"]	["*"]
5		eab2fea0-89ac-4966-9932-af8f5aa9b23d	Top 5 City by revenue	Top 5 City by revenue	["*"]	["*"]
6		829b57e6-4cab-4ec9-9467-3c5f5450c6c8	revenue by month	revenue by month	["*"]	["*"]
7		fdb4121a-e686-4b63-a156-cb3668a0c68f	revenue by unit by customer	revenue by unit by customer	["*"]	["*"]
8		c6702f38-8ad0-4cbf-83b7-02936f5611f5	Revenue by customer	Revenue by customer	["*"]	["*"]
9		4486443f-af4d-4a57-992f-8fb8cebd8c848	revenue by month	revenue by month	["*"]	["*"]
10		efdaabdc-5be1-4c56-ba4b-c6d4dd18df74	revenue by City	revenue by City	["*"]	["*"]



## 3.2.4 Get Insights and Components as JSON

The functionality of the **'getInsightsAndComponentsAsJson'** function empowers users to obtain an all-encompassing collection of insights, along with their associated components in JSON format, of the dataset.

### Insights\_variable.getInsightsAndComponentsAsJson()



```
[1]: from conversight import ProactiveInsights
[2]: dataset_id = "6412ae74-N3VuSsa4m"
[3]: proinsight = ProactiveInsights(datasetId=dataset_id)
[7]: insight_component_data_json = proinsight.getInsightsAndComponentsAsJson()
[8]: insight_component_data_json

[8]: [{"isProActive": False,
      "insightName": "",
      "_key": "0102c84e-4849-48d8-b51d-c5c485056780",
      "answer": "",
      "dataSetID": "6412ae74-N3VuSsa4m",
      "domainName": "Sales",
      "businessArea": "",
      "chartType": "",
      "id": "0102c84e-4849-48d8-b51d-c5c485056780",
      "inference": "@revenue >0",
      "inferenceQuery": "'label_RetailSales.revenue' >0",
      "inferenceType": "",
      "inferencePipeline": None,
      "question": "revenue",
      "sqlForm": "SELECT round(sum(coalesce(subquery.\"label_RetailSales.revenue\", 0)), 2) AS \"label_RetailSales.revenue\" \nFROM (SELECT round(sum(coalesce(@RetailSales.revenue, 0)), 2) AS \"label_RetailSales.revenue\" \nFROM (#)RetailSales) AS subquery",
      "template": "The revenue on sales is @revenue",
      "advancedTemplate": "",
      "createdAt": "2023-05-04T05:46:14Z",
      "updatedAt": "2023-05-04T05:46:14Z",
      "createdBy": "77378b1b-5cfb-497c-b4ac-a1a0e4922430",
      "updatedBy": "77378b1b-5cfb-497c-b4ac-a1a0e4922430",
      "roles": ["*"],
      "groups": ["*"],
      "category": ["web", "mobile", "controlTower"],
      "metaData": {"revenue": {"additional_data": {"precision": 2},
      "alias": "revenue",
```

## 3.3 Update Insights

The functionality of the **'updateInsight'** function is designed to update a specific Insight within the dataset using its unique Insight ID. **'Insight ID'** is a unique identifier generated specifically for each insight. This function empowers users to modify and refine the information associated with an insight, ensuring its ongoing relevance and adaptability over time. The Update Insight function utilizes identical arguments as the Create Insight function.



```

File Edit View Run Kernel Share Tabs Settings Help
Log Out Mem: 378 / 8192 MB
Python 3 (ipykernel)
Filter files by name
Name Last Modified
data 21 hours ago
notebook 9 months ago
work last year
Untitled.ipynb 51 seconds ago

[1]: from conversight import ProactiveInsights
[2]: dataset_id = "6412ae74-N3VuSsa4m"
[3]: proinsight = ProactiveInsights(datasetId=dataset_id)
[ ]: proinsight.updateInsight(
Signature:
proinsight.updateInsight(
  domain: str,
  insightName: str,
  insightId: str,
  data: str,
  order: int,
  followupQuestion: str,
  roles: list,
  groups=None,
  followUpType: str = 'data',
  thumbnailURL: str = '',
  explorerURL: str = '',
  businessArea: str = '',
  chartType: str = '',
)
Docstring:
Updates insight ( ^ ^ ^ )
Args:
- domain (str): The name of the domain. Cannot be `None` or an empty string. By default it set

```

```

File Edit View Run Kernel Share Tabs Settings Help
Log Out Mem: 622 / 8192 MB
Python 3 (ipykernel)
Filter files by name
Name Last Modified
data 3 days ago
notebook 14 days ago
work last year
Untitled.ipynb 2 minutes ago
Untitled1.ipynb 1 minute ago

[6]: proinsight.updateInsight(domain="Sales",insightName="SAMPLE",insightId="03ac992c-c61e-462d-8dd8-52aac2111431",data="update - proactive insights",order=
[2023-12-05 04:57:37,161] [INFO] ***** updating proactive insight *****
[2023-12-05 04:57:37,308] [INFO] proactive insight updated successfully !!
[6]: {'status': 'success', 'message': 'proactive insight updated successfully'}
[7]: proinsight.getInsights()

S.No insight Name Data Text Insight Id Followup Question Roles Groups Updated Time
1 0102c84e-4849-48d8-b51d-c5c485056780 revenue by City ["*"] ["*"] 2023-05-04 05:46:14+00:00
2 e6f3eb24-a4fc-4576-a99b-73be8a0bc123 Top 5 customers by revenue ["*"] ["*"] 2023-05-09 09:29:22+00:00
3 e6569055-5bff-4070-9207-66270e2444e9 revenue by month ["*"] ["*"] 2023-05-23 07:08:44+00:00
4 71b9a60e-96f1-40a1-87cc-7ba5d475e20c revenue by year ["*"] ["*"] 2023-09-12 09:46:46+00:00
5 eab2fea0-89ac-4966-9932-af8f5aa9b23d Top 5 City by revenue ["*"] ["*"] 2023-05-09 11:01:17+00:00
6 829b57e6-4cab-4ec9-9467-3c5f5450c6c8 revenue by month ["*"] ["*"] 2023-05-23 07:11:32+00:00
7 fdb4121a-e686-4b63-a156-cb3668a0c68f revenue by unit by customer ["*"] ["*"] 2023-09-12 09:49:42+00:00
8 c6702f38-8ad0-4cbf-83b7-02936f5611f5 Revenue by customer ["*"] ["*"] 2023-09-26 04:41:05+00:00
9 4486443f-af4d-4a57-992f-8fb8cebdc848 revenue by month ["*"] ["*"] 2023-12-04 04:53:51+00:00
10 SAMPLE update - proactive insights 03ac992c-c61e-462d-8dd8-52aac2111431 Revenue by month ["*"] ["*"] 2023-12-05 04:57:37+00:00
11 efdaabdc-5be1-4c56-ba4b-c6d4dd18df74 revenue by City ["*"] ["*"] 2023-05-04 05:43:44+00:00

[ ]:

```

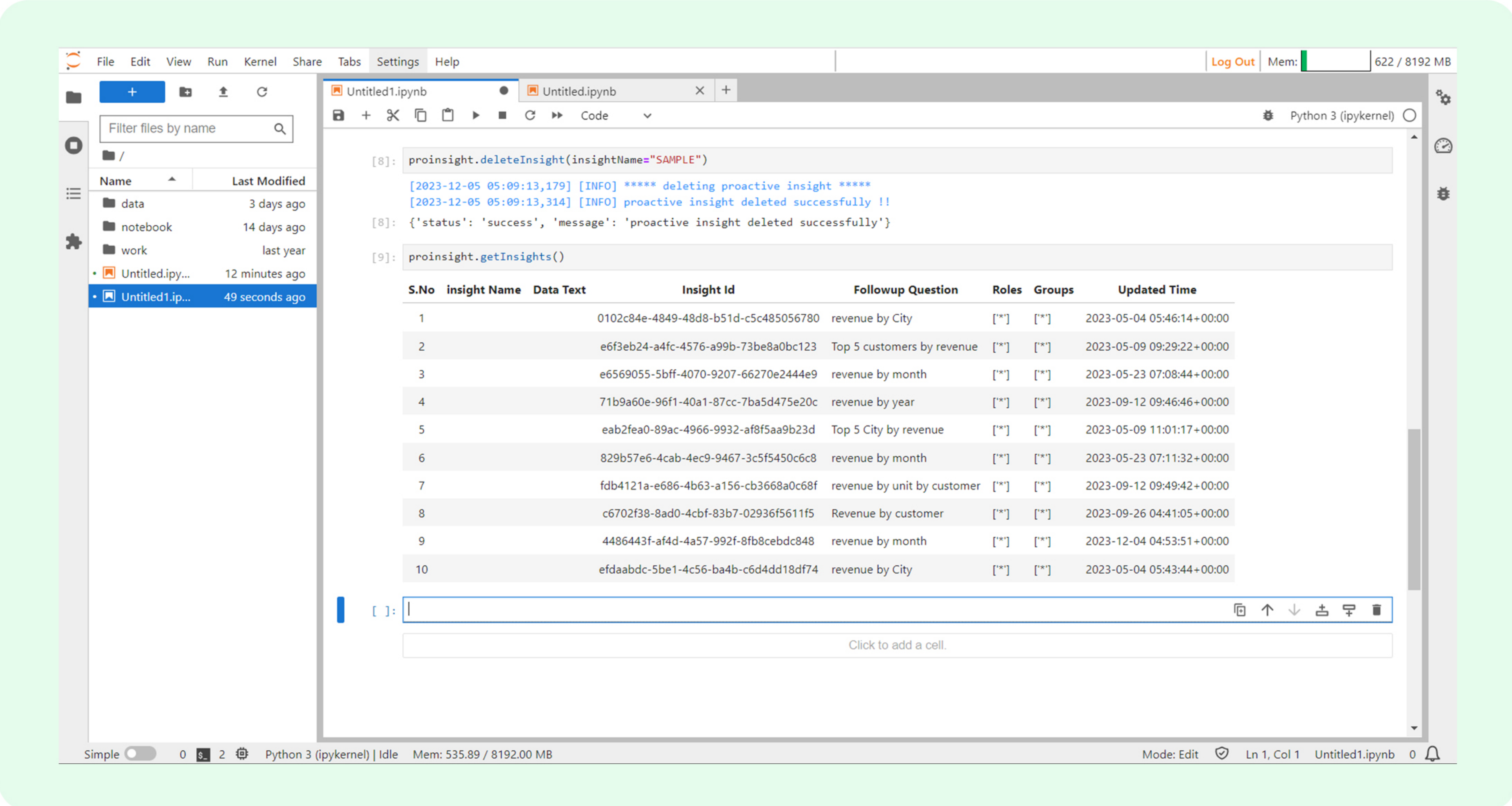




# 3.4 Delete Insights

The **'deleteInsight'** function empowers users to permanently remove an Insight from the dataset, utilizing the Insight's name as the identifier. This functionality ensures a decisive and irreversible deletion of the specified Insight, providing users with a straightforward and efficient means to manage their dataset by eliminating unnecessary or outdated insights.

```
Insight_variable.deleteInsight(insightName="your_Insight_Name")
```



## 4. Conclusion

In conclusion, the utilization of Jupyter Notebook for creating and managing proactive insights within the ConverSight platform offers numerous advantages. The seamless integration of ProactiveInsights functions enhances the efficiency of insight generation, updates, and deletions. Leveraging the familiar Jupyter environment provides users with a flexible and customizable space for data exploration, promoting transparency and reproducibility. The structured approach to creating insights, the ability to update and refine information over time, and the straightforward deletion process contribute to the dynamic nature of proactive insights. Furthermore, the integration of Jupyter Notebooks within ConverSight extends its utility, aligning seamlessly with data science, scientific computing, and machine learning practices. This synergy empowers users to harness the full potential of proactive insights, making informed decisions and driving strategic approaches to problem-solving and data analysis.



## 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)

