

The screenshot shows the Databricks Catalog Explorer interface. On the left, a sidebar lists various navigation options such as Workspace, Recents, Catalog (which is selected), Jobs & Pipelines, Compute, Marketplace, SQL Editor, Queries, Dashboards, Genie, Alerts, Query History, SQL Warehouses, Data Engineering, Job Runs, Data Ingestion, AI/ML, Playground, Experiments, Features, Models, and Serving. The main area displays a tree view of the catalog structure under the 'healthcare' workspace. A specific table, 'material_master_1_k', is selected and highlighted with a blue border. The table details are shown on the right, including its schema:

Column	Type	Comment	Tags	Column masking
material_id material_name category	string	Add comment	Add tags	Add column mask

Below the schema, there is a section titled 'About this table' with the following information:

- Owner: kalvakuntla.b@northeastern.edu
- Type: Managed
- Data source: Delta
- Popularity:
- Last updated: 29 seconds ago
- Size: 38.8KiB, 1 file

There are also sections for Tags, Row filter, and Policies.

The screenshot shows the Databricks Notebook interface. The left sidebar is identical to the one in the previous screenshot. The main area shows a workspace named 'Material_Master_Pipeline' containing several notebooks: 'Patient_Medallion', 'SCD 1 and 2', 'Untitled Notebook 2025-10-21 18:32:56', 'Untitled Notebook 2025-10-21 18:44:36', and 'Workspace Usage Dashboard'. A new notebook tab titled 'Material_Master_Pipeline' is currently active. The code editor shows a single cell with the following content:

```
Start typing or generate with AI (⌘ + I)...
```

Below the code editor, keyboard shortcuts are listed:

- [Shift+Enter] to run and move to next cell
- [Cmd+Shift+P] to open the command palette
- [Esc H] to see all keyboard shortcuts

The screenshot shows the Databricks workspace interface. On the left is the sidebar with navigation links like Workspace, Recents, Catalog, Jobs & Pipelines, Compute, Marketplace, SQL, Data Engineering, AI/ML, and Data Ingestion. The main area displays a Python notebook titled 'Material_Master_Pipeline'. The notebook contains the following code:

```
%sql  
SELECT current_catalog(), current_schema();
```

The results of the query are displayed in a table:

A: current_catalog()	B: current_schema()
1 workspace	mm_demo_db

Runtime: 0.74s

The screenshot shows the Databricks workspace interface. On the left is the sidebar with navigation links like Workspace, Recents, Catalog, Jobs & Pipelines, Compute, Marketplace, SQL, Data Engineering, AI/ML, and Data Ingestion. The main area displays a Python notebook titled 'Material_Master_Pipeline'. The notebook contains the following code:

```
%sql  
USE CATALOG healthcare;  
USE SCHEMA default;
```

The results of the query are displayed in a table:

OK
5

Runtime: 0.74s

Screenshot of Databricks workspace showing a Python notebook titled "Material_Master_Pipeline".

The notebook contains the following code:

```
bronze_table = "healthcare.default.material_master_1_k"
df = spark.table(bronze_table)
df.display()
```

The resulting DataFrame is displayed as a table:

	material_id	material_name	category	sub_category	uom	unit_cost	supplier_name	country	plant	status	last_updated
1	M00001	Metal Chair	Raw Material	Metal	L	70.63	Rodriguez				
2	> M00002	Plastic All	Raw Material	Plastic NOS	14.24	Garza Inc	Germany	PlantD	Active	2025-08-21	16 653 167 Discus
3	M00003	Plastic Perform	Raw Material	Plastic	MTR	78.58	Santos				
4	> M00004	Paint	Source	Consumable	KG 268.58	Peterson-Moore	Japan	PlantA	Obsolete	2025-09-13	11 899 346
5	> M00005	Coolant	Show Consumable	Coolant	KG 114.72	Munoz-Roman	India	PlantA	Active	2025-09-25	5 439 167 By
6	> M00006	Tape Answer	Packaging	Tape NOS	105.54	Ray-Bush	India	PlantA	Obsolete	2025-10-15	7 598 398 Significan
7	> M00007	Brake	Brake	Component	KG 494.77	James Group	Brazil	PlantB	Obsolete	2025-10-31	12 913 418 Ck
8	M00008	Plastic	Shoulder	Raw Material	Plastic	KG 201.18	Wong				
9	M00009	Wrap Stand	Packaging	Wrap T0.68	Hawkins						
10	> M00010	Tape Under	Packaging	Tape NOS	70.03	Clark PLC	Japan	PlantA	Active	2025-10-20	5 206 346 Defense mate
11	> M00011	Body Size	Component	Body KG 98.35	Baker and Sons	Japan	PlantC	Obsolete	2025-10-05	2 746 394 Enjoy	
12	M00012	Rubber Someone	Raw Material	Rubber L 217.95	Hicks Inc	Japan	PlantA	Obsolete	2025-08-16	10 562 415 Che	
13	M00013	Engine Management	Component	Engine L 254.32	Henderson						
14	M00014	Rubber Specific	Raw Material	Rubber MTR abc	Wilson						

Screenshot of Databricks workspace showing a SQL notebook titled "Material_Master_Pipeline".

The notebook contains the following code:

```
%sql
USE CATALOG healthcare;
USE SCHEMA default;

SELECT COUNT(*) AS silver_count FROM silver_material_master;
SELECT * FROM silver_material_master LIMIT 20;
```

The resulting DataFrame is displayed as a table:

	format	id	name	desc
1	delta	edaa1096-91c7-4c50-b46b-a9ec0de51a4f	healthcare.default.silver_material_master	null

Information at the bottom of the table:

- 1 row | 1.58s runtime
- Refreshed now

Note: This result is stored as `_sqldf` and can be used in other Python and SQL cells.

The screenshot shows the Databricks workspace interface. On the left is the sidebar with various navigation options like Workspace, Recents, Catalog, Jobs & Pipelines, Compute, Marketplace, SQL, Data Engineering, Job Runs, Data Ingestion, AI/ML, and more. The main area shows a notebook titled "Material_Master_Pipeline". The code in the notebook is as follows:

```
df = df.dropDuplicates()

print("Silver candidate rows:", df.count())
df.display()

> [See performance (2)]
```

Below the code, there is a preview of the DataFrame:

material_id	material_name	category	sub_category	unit_cost	supplier_name	country	plant	status	last_updated	
M00013	Engine Management	Component	Engine	254.32	Henderson	USA	PlantA	Obsolete	2025-06-10	
M00014	Rubber Specific	Raw Material	Rubber	MTR	abc	Wilson	PlantB	Active	2025-06-10	
M00015	Metal White	Raw Material	Metal	MTR	489.01	Baker	PlantC	Active	2025-06-10	
M00016	Grease Place	Consumable	Grease	NOS	377.88	Ashley	PlantD	Active	2025-06-10	
M00017	Grease Our	Consumable	Grease	MTR	113.12	Allen-Allen	India	PlantA	Obsolete	2025-08-19
M00018	Engine Often	Component	Engine	KG	30.38	Cannon	PlantB	Active	2025-08-19	
M00019	Grease Inside	Consumable	Grease	NOS	361.95	Campos	PlantC	Active	2025-08-19	
M00020	Engine Per	Component	Engine	KG	177.79	Smith-Spencer	Japan	PlantD	Obsolete	2025-09-02
M00021	Metal Trade	Raw Material	Metal	MTR	400.50	Jones Inc	USA	PlantB	Active	2025-09-13
M00022	Body Worry	Component	Body	NOS	1256.65	Lewis-Anderson	USA	PlantD	Obsolete	2025-11-05
M00023	Metal Shoulder	Raw Material	Metal	NOS	243.33	Jordan	PlantC	Active	2025-09-24	
M00024	Tape Not	Packaging	Tape	MTR	348.6	Wright and Sons	Brazil	PlantD	Active	2025-09-24
M00025	Metal Billion	Raw Material	Metal	L	292.5	Ramos PLC	Mexico	PlantB	Active	2025-08-16

The screenshot shows the Databricks workspace interface. On the left is a sidebar with various navigation links such as Workspace, Recents, Catalog, Jobs & Pipelines, Compute, Marketplace, SQL, Data Engineering, AI/ML, and more. The main area displays a Python notebook titled "Material_Master_Pipeline". The notebook contains the following code:

```
Just now (c1s) 14
df = df.filter(F.col("material_id").isNotNull())
df = df.filter(F.col("unit_cost").isNull() | (F.col("unit_cost") >= 0))
df = df.filter(F.col("status").isin("Active", "Obsolete") | F.col("status").isNull())

df: pyspark.sql.connect.DataFrame
material_id|material_name|category|sub_category|uom|unit_cost|supplier_name|country|pl
```

Below the code, there is a note: "This result is stored as `_sqlDF` and can be used in other Python and SQL cells." At the bottom of the notebook, keyboard shortcuts are listed: [Shift+Enter] to run and move to next cell, [Cmd+Shift+P] to open the command palette, and [Esc H] to see all keyboard shortcuts.

This screenshot shows the same workspace and notebook setup as the first one. The notebook contains the same initial code as before. However, the output cell has been expanded to show performance feedback:

```
Just now (c1s) 15
from pyspark.sql import functions as F
print("Databricks user:", spark.sql("select current_user() u").first().u)
print("Workspace URL:", spark.conf.get("spark.databricks.workspaceUrl", "CE"))

> See performance (1)
```

The feedback indicates that the Databricks user is "kalvakuntla.b@northeastern.edu" and the workspace URL is "dbc-509b9ea5-ed04.cloud.databricks.com". At the bottom of the notebook, the same keyboard shortcuts are listed: [Shift+Enter] to run and move to next cell, [Cmd+Shift+P] to open the command palette, and [Esc H] to see all keyboard shortcuts.