

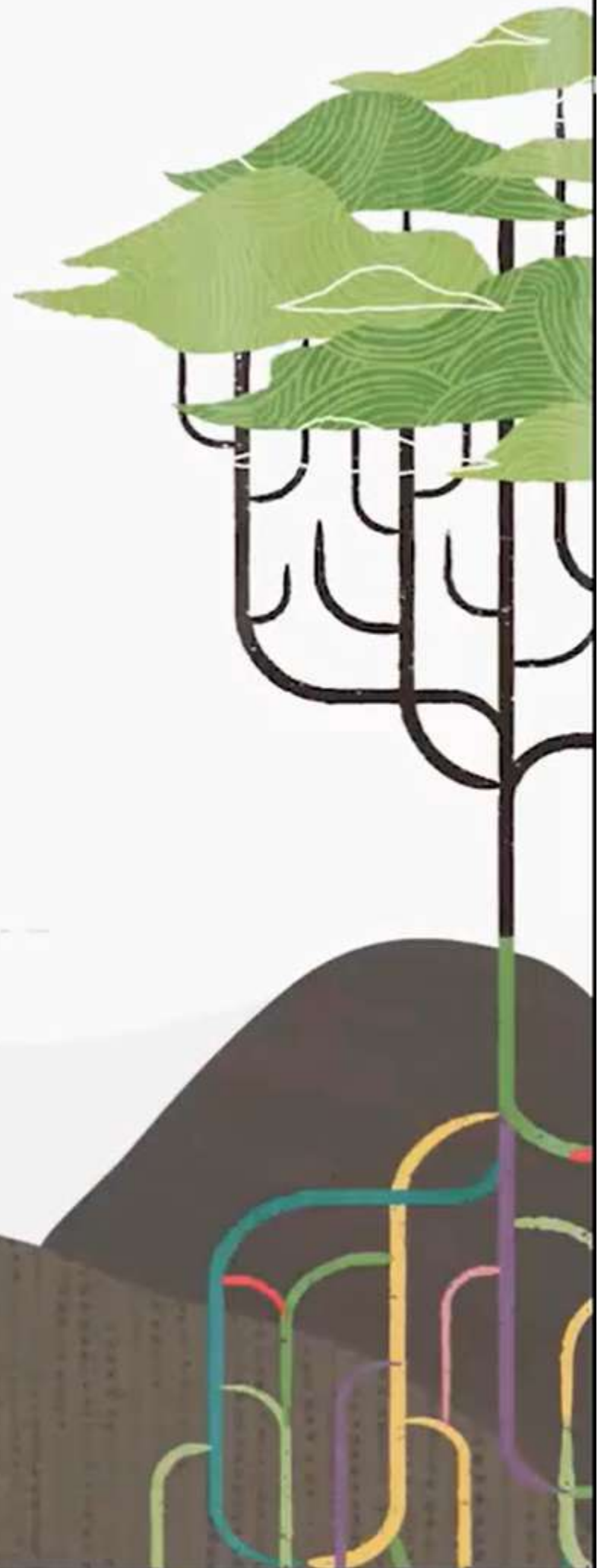
 University

Michelle Malcher

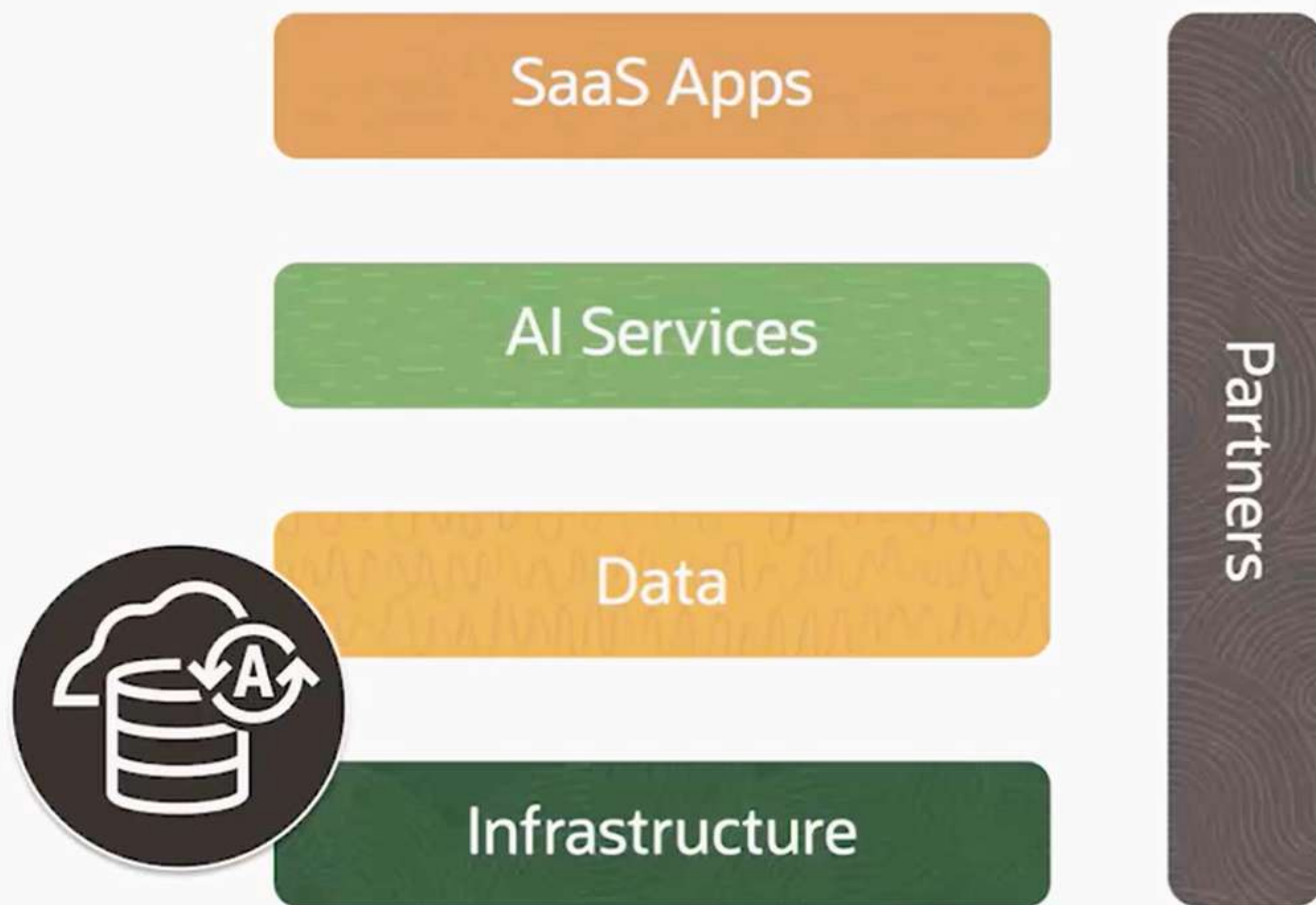
DIRECTOR, PRODUCT MANAGEMENT
ORACLE

Natural Language Queries Just Ask Your Database

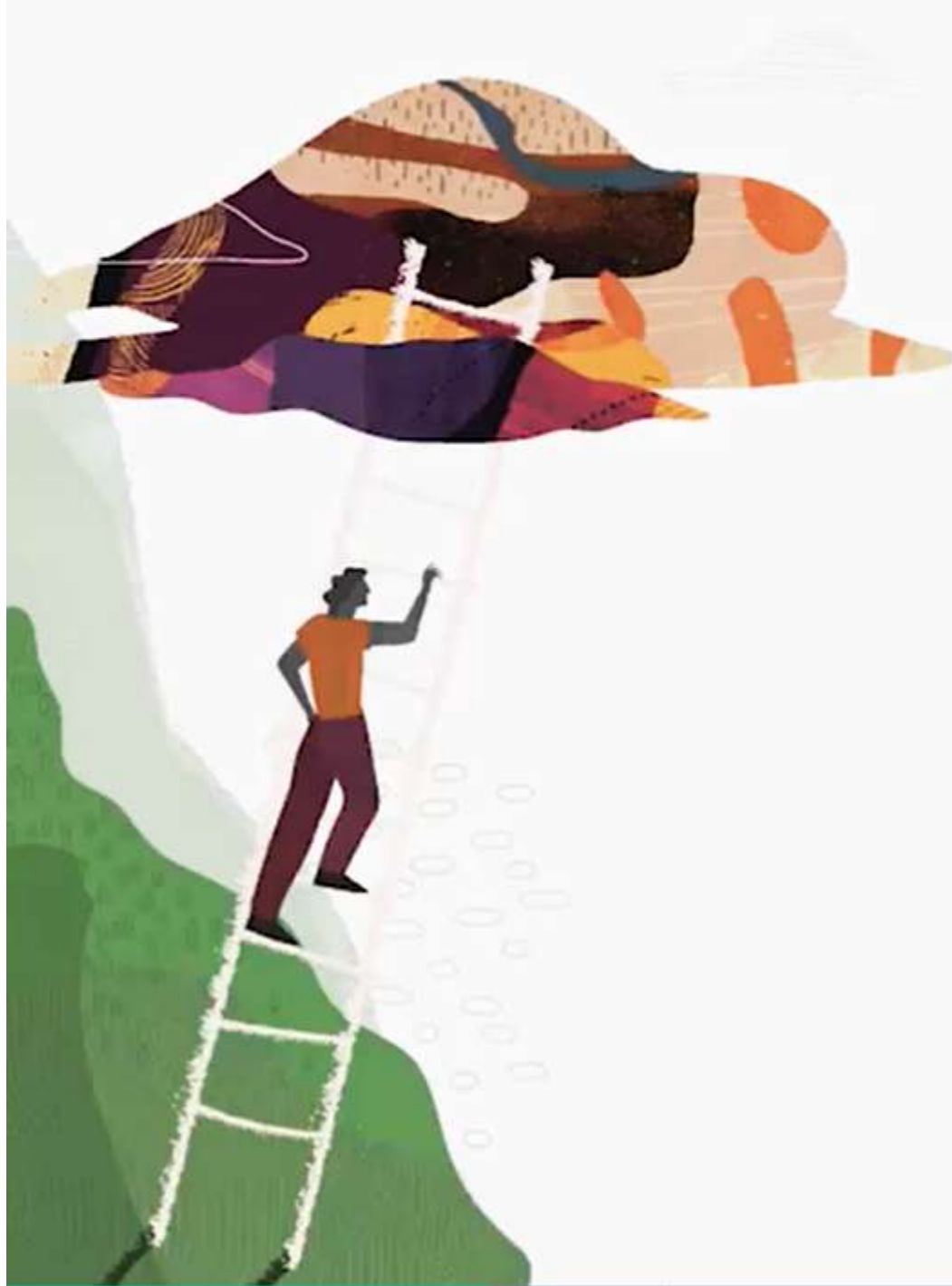
—
Use natural language to analyze your
data using Select AI and GenAI.



Oracle can bring **AI**
to the enterprise
at **every layer**
of our stack.



Agenda



Select AI in Oracle Autonomous Database

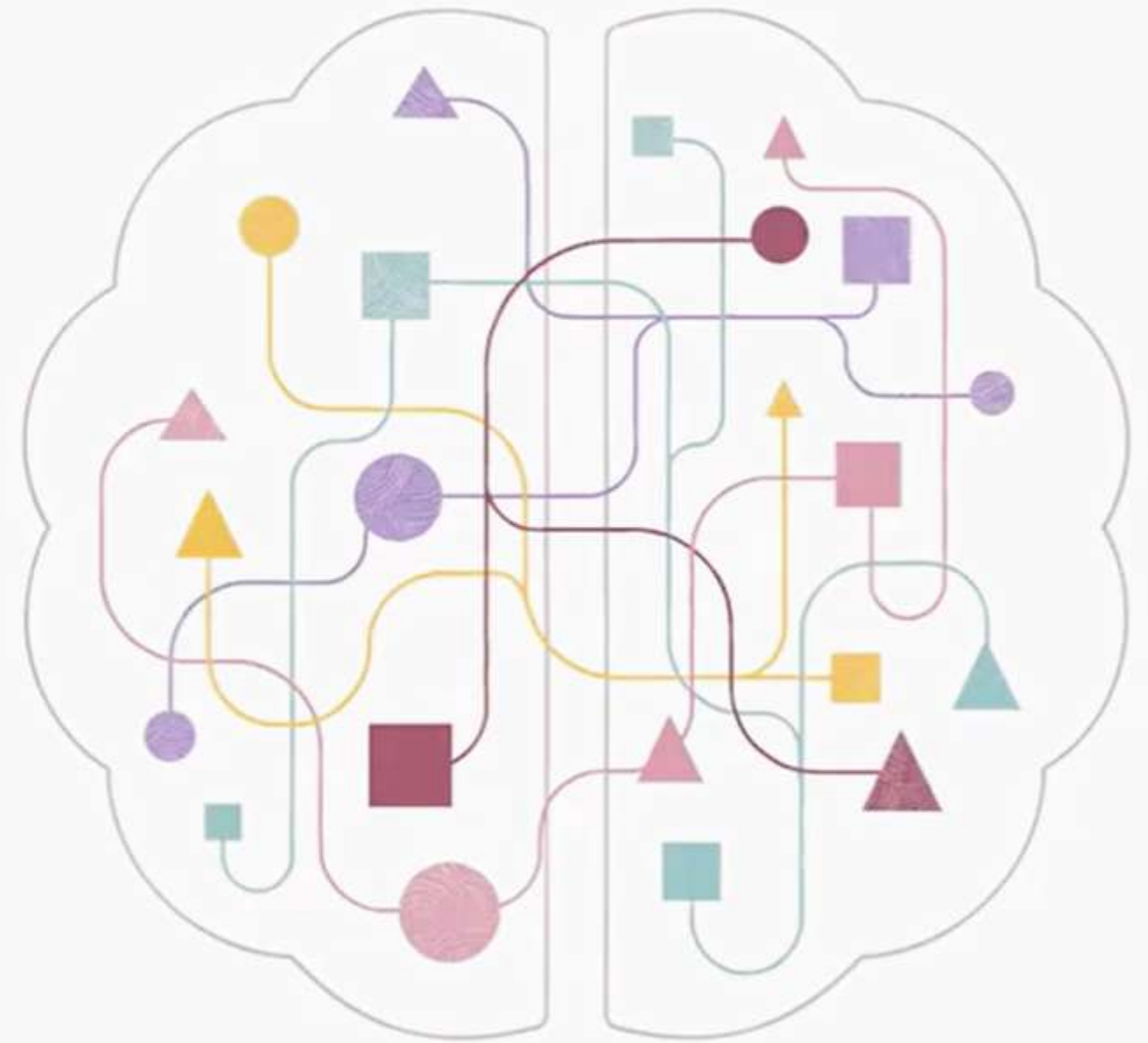
Easily query your data using natural language

SQL query generation process flow

Autonomous Database Select AI

Simplest way to get answers about your business

- > Use **your language** to query data.
- > There is no need to understand where and how your data is stored to gain insights.



Select AI

Simplest way to get answers about your business

Just ask a question.

Autonomous Database
manages the entire
query process to
produce your answer.

What are our total streams for each
Tom Hanks movie this month?

The screenshot shows the ADB Chat interface. On the left is a sidebar with a menu icon and the title 'ADB Chat'. Below the title are three chat history items: 'George Clooney: Known for ...', '"Albert Einstein: A Brief Intro...', and 'Exploring NYC: A One-Week ...'. The main area displays a query 'what are our total streams for each tom hanks movie this month?' in a light gray box. Below the query is a table with two columns: 'Movie Title' and 'Total Streams'. The table contains ten rows of data. Below the table, it says 'More rows available' with links for 'Explore' and 'Explain'. At the bottom, there is a text input field with the same query, a send button, and a checkbox labeled 'Ask Database' which is checked.

Movie Title	Total Streams
Forrest Gump	443.00
Sleepless in Seattle	95.00
Splash	47.00
Angels & Demons	249.00
Saving Private Ryan	212.00
Who Killed the Electric Car?	6.00
Philadelphia	101.00
Big	116.00
Cast Away	222.00
The Great Buck Howard	3.00

Demonstration

Speak “Human” to
Autonomous Database
to get your business
questions answered.

The screenshot shows the ADB Chat interface. On the left is a sidebar with a menu icon and three conversation items: "George Clooney: Known for ...", "Albert Einstein: A Brief Intro...", and "Exploring NYC: A One-Week ...". The main chat area has a title bar with "ADB Chat", "Delete Conversation", and "New Conversation" buttons. The chat history shows two messages from the user asking about George Clooney's awards. The assistant's response lists five awards: 5. Primetime Emmy Awards (Outstanding Drama Series as a producer for "ER" (1995)) and 6. American Film Institute Awards (AFI Life Achievement Award (2018)). Below this, the user asks for the total number of views for each George Clooney movie. The assistant responds with a table:

TITLE	TOTAL_VIEWS
Syriana	1,144.00
The Perfect Storm	2,262.00
Gravity	3,031.00
Ocean's Eleven	4,214.00
Ocean's Twelve	2,890.00

Below the table are links for "Explore" and "Explain". At the bottom is an input area with a microphone icon, a text box containing "Ask a question", and a checkbox labeled "Ask Database" which is currently checked.

- Top 10 Streamed Movies
- "Albert Einstein: A Brief Intro...
- Exploring NYC: A One-Week ...
- Summary of the movie "Big"
- Harrison Ford's Notable Achi...

Captain Marvel	33,587.00
The Lion King	33,064.00
Star Wars Episode IX: The Rise of Skywalker	31,331.00
Aladdin	29,779.00
Spider-Man: Far from Home	29,021.00
Aquaman	20,357.00
Avengers: Infinity War	18,813.00
Toy Story 4	17,426.00
Bohemian Rhapsody	16,936.00

Explore SQL

who starred in Avengers: Endgame?

ACTOR
Stan Lee
Ava Russo
James Lin
Joe Russo
Ken Jeong
Lee Moore
Lexi Rabe
Mike Lutz
Paul Rudd
Sean Gunn

More actors available

Ask a question

Ask Database

- Top 10 Streamed Movies
- "Albert Einstein: A Brief Intro...
- Exploring NYC: A One-Week ...
- Summary of the movie "Big"
- Harrison Ford's Notable Achi...

Captain America: The Winter Soldier
Captain Marvel
Guardians of the Galaxy
Guardians of the Galaxy Vol. 2
Iron Man
Jay & Silent Bob's Super Groovy Cartoon Movie

More rows available
[Explore](#) [SQL](#)

What are the total streams for each Paul Rudd or Stan Lee movies?

TITLE	TOTAL_STREAMS
Spider-Man 3	4,013.00
Night at the Museum	2,222.00
Avengers: Endgame	162,148.00
Avengers: Age of Ultron	9,310.00
Iron Man 3	5,488.00
Captain America: Civil War	17,514.00
Jay & Silent Bob's Super Groovy Cartoon Movie	10.00
Iron Man	8,319.00
Spider-Man: Homecoming	11,340.00
The Avengers	13,435.00

More rows available
[Explore](#) [SQL](#)

Ask a question

☒ Ask Database ?

Top 10 Streamed Movies

"Albert Einstein: A Brief Intro...

Exploring NYC: A One-Week ...

Summary of the movie "Big"

Harrison Ford's Notable Achi...

SQL

Update SQL

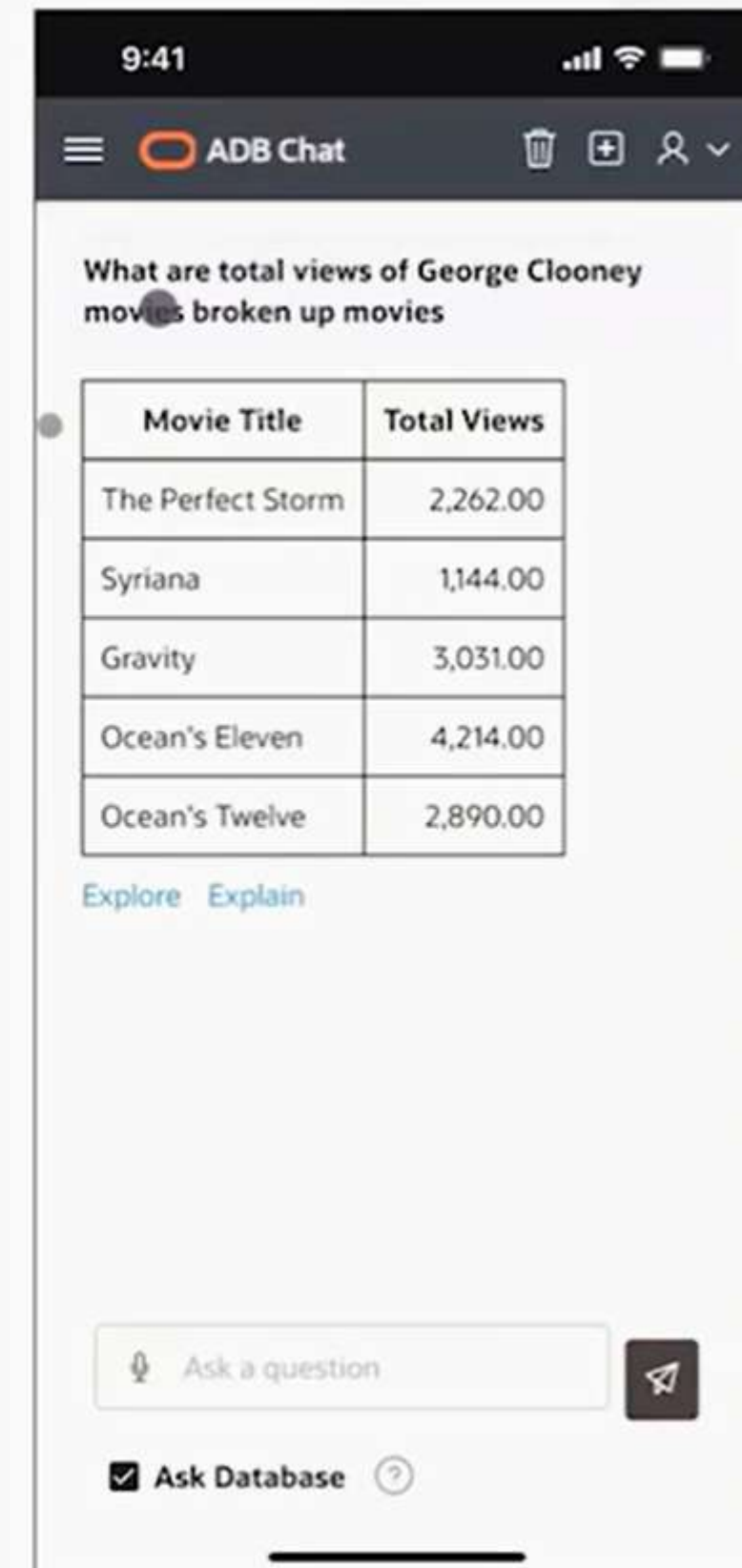
```
1 SELECT m.TITLE, COUNT(s.DAY_ID) AS TOTAL_STREAMS
2 FROM MOVIESTREAM.MOVIES m
3 JOIN MOVIESTREAM.STREAMS s ON m.MOVIE_ID = s.MOVIE_ID
4 JOIN MOVIESTREAM.ACTORS a ON m.MOVIE_ID = a.MOVIE_ID
5 WHERE a.ACTOR IN ('Paul Rudd', 'Stan Lee')
6 GROUP BY m.TITLE
```



Select AI

Simplest way to get answers about your business

Perfect for getting answers when you're on the move



Select AI Translates Your Language into Oracle SQL Language

Processes question using an AI large language model (LLM)

Question

Inference

what are our

Total streams



Total number of
movie views

For each



Breakout views
by movie

Tom Hanks
movie



Tom Hanks is
an actor.

this month?



Understanding
of time



Select AI Translates Your Language into Oracle SQL Language

Processes question using an AI large language model (LLM)

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what are our

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Total number of
movie views



For each



Breakout views
by movie



Tom Hanks
movie



Tom Hanks is
an actor.



this month?



Understanding
of time



```
SELECT
  m.title AS movie_title,
  COUNT(s.views) AS total_streams
FROM movie m
  JOIN activity s ON m.movie_id = s.movie_id
  JOIN actors a ON m.movie_id = a.movie_id
WHERE a.actor = 'Tom Hanks'
  AND EXTRACT(MONTH FROM s.day_id) =
    EXTRACT(MONTH FROM SYSDATE)
GROUP BY m.title
```


Developing Apps with Select AI

Simple

Designed so that you can easily build generative AI capabilities into new or existing applications

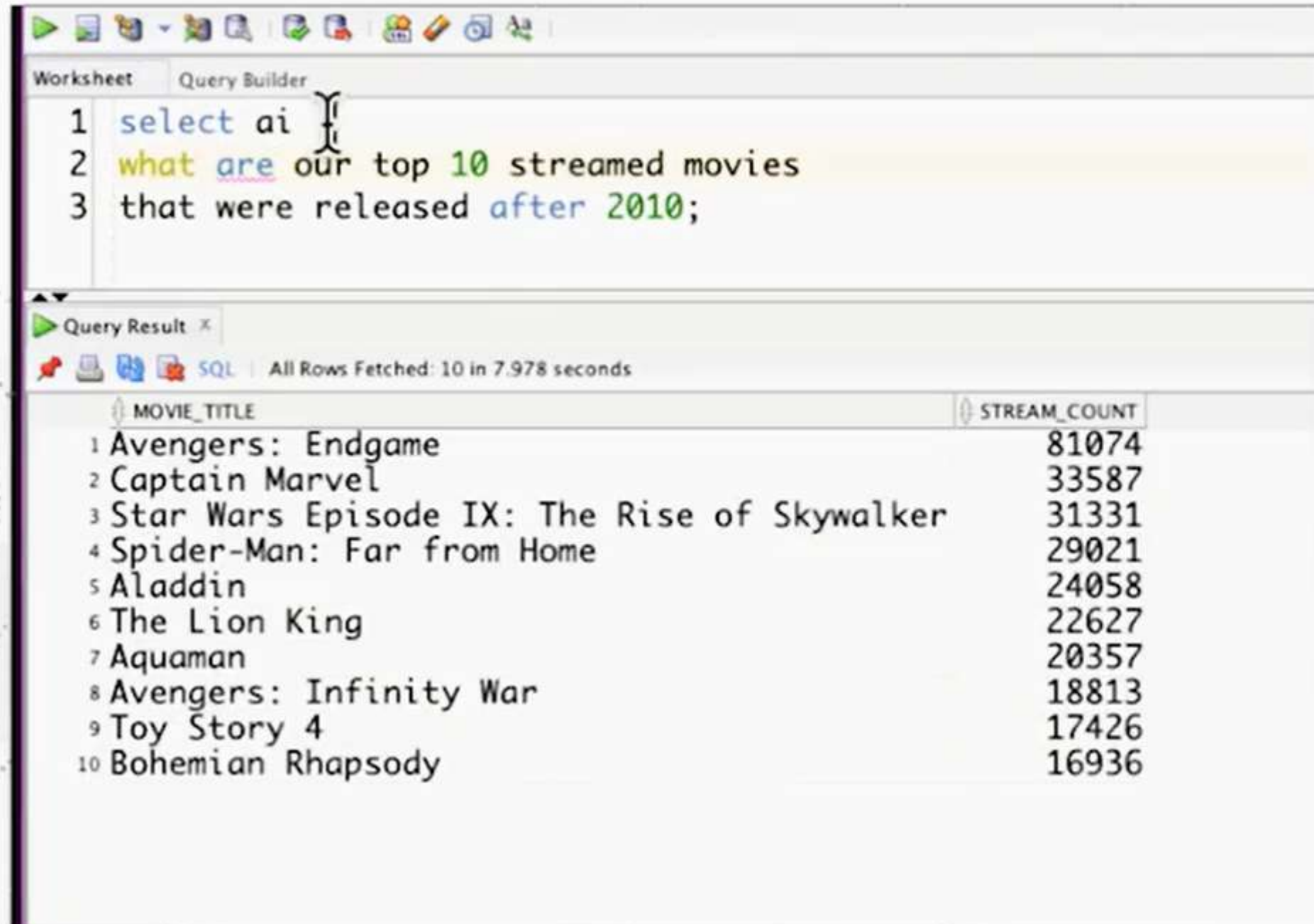
Future-enabled

Choose from an array of large language models. Pick the model that is best suited to your business.

Secure

Rely on the same Oracle Database security that protects your data. Plus, when using OCI Generative AI, your data will not be sent to the LLM provider or seen by other customers.

Easy to Extend and Build New Natural Language Apps



The screenshot shows a 'Query Builder' window with a 'Worksheet' tab. The query is entered in three lines:

```
1 select ai  
2 what are our top 10 streamed movies  
3 that were released after 2010;
```

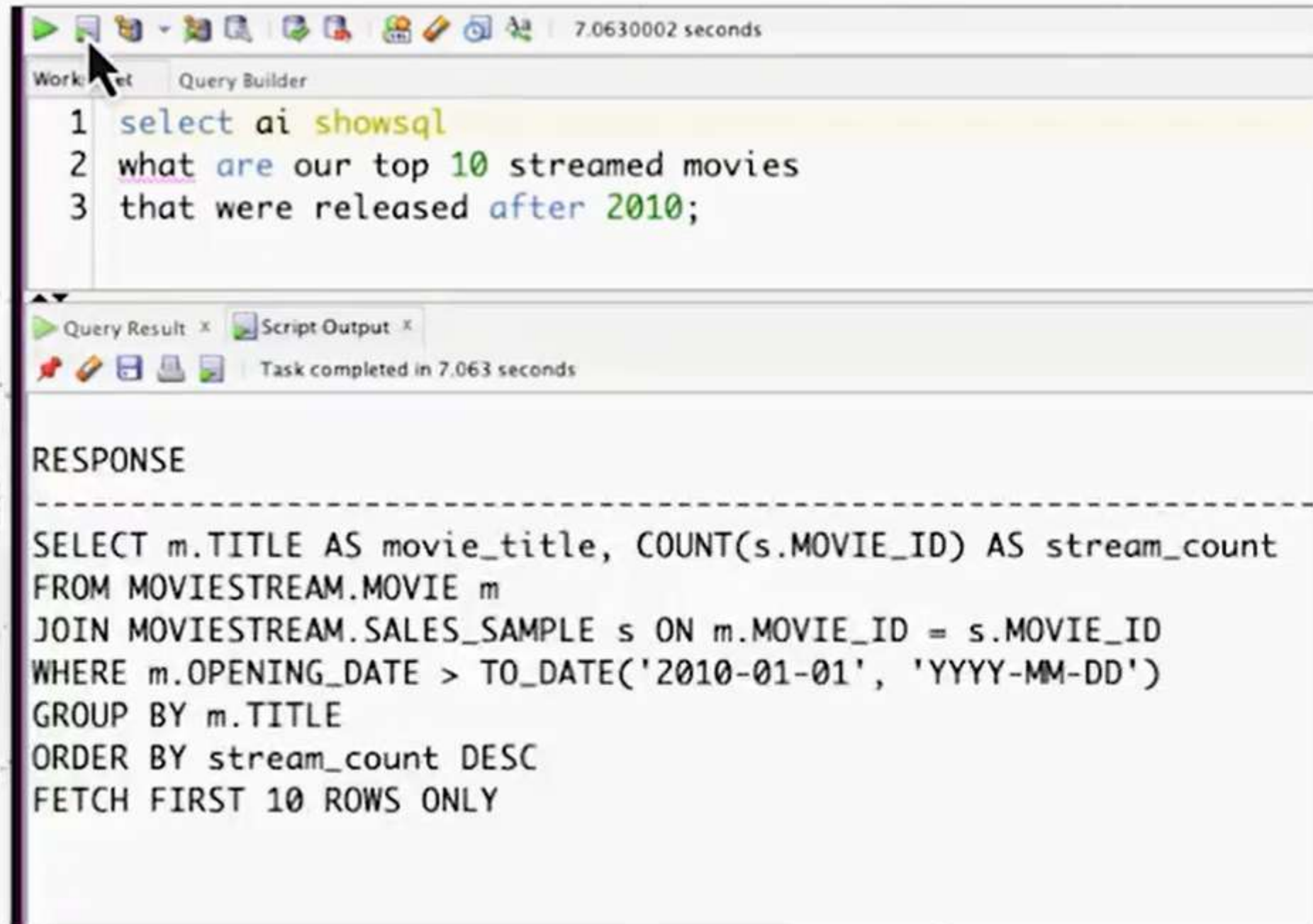
Below the query, the 'Query Result' tab is active, showing a table with 10 rows. The status bar indicates 'All Rows Fetched: 10 in 7.978 seconds'.

MOVIE_TITLE	STREAM_COUNT
1 Avengers: Endgame	81074
2 Captain Marvel	33587
3 Star Wars Episode IX: The Rise of Skywalker	31331
4 Spider-Man: Far from Home	29021
5 Aladdin	24058
6 The Lion King	22627
7 Aquaman	20357
8 Avengers: Infinity War	18813
9 Toy Story 4	17426
10 Bohemian Rhapsody	16936

Use a **standard SELECT** statement followed by **AI and your question**.

Process the result as you would any other SQL result set.

Easy to Extend and Build New Natural Language Apps



The screenshot shows a software interface with a top toolbar containing various icons and a timer displaying '7.0630002 seconds'. Below the toolbar is a tabbed interface with 'Worksheet' and 'Query Builder' tabs. The 'Query Builder' tab is active and contains a text area with the following text:

```
1 select ai showsql
2 what are our top 10 streamed movies
3 that were released after 2010;
```

Below the text area is another toolbar with icons for 'Query Result' and 'Script Output', and a status bar indicating 'Task completed in 7.063 seconds'. The main area of the interface displays the word 'RESPONSE' followed by a dashed line and a SQL query:

```
SELECT m.TITLE AS movie_title, COUNT(s.MOVIE_ID) AS stream_count
FROM MOVIESTREAM.MOVIE m
JOIN MOVIESTREAM.SALES_SAMPLE s ON m.MOVIE_ID = s.MOVIE_ID
WHERE m.OPENING_DATE > TO_DATE('2010-01-01', 'YYYY-MM-DD')
GROUP BY m.TITLE
ORDER BY stream_count DESC
FETCH FIRST 10 ROWS ONLY
```

Use a **standard SELECT** statement followed by **AI and your question**.

Process the result as you would any other SQL result set.

Have a **Conversation** to Get Your Questions Answered

```
sql-scripts > conversations.sql > ...
35  -- Have a Conversation with your data
36  -- Ask an initial question and then build on that - just like a normal conversation
37
38  -- Begin with a high level question
39  select ai Start with our total streams;
40
41  -- Give me more details
42  select ai Break that out by genre;
43
44  -- Which customer segments are watching the genres?
45  select ai Add customer segment;
46
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS QUERY RESULT SCRIPT OUTPUT SQ

All rows fetched: 1 in 0.088 seconds

	TOTAL_STREAMS
1	2503281

Your first question is not your last!

Keep refining your questions until you get the answer you need.

Future-Enabled: Easy to Configure Your Data for Natural Language Queries

Use one or more **Select AI Profiles** that is best for your business.

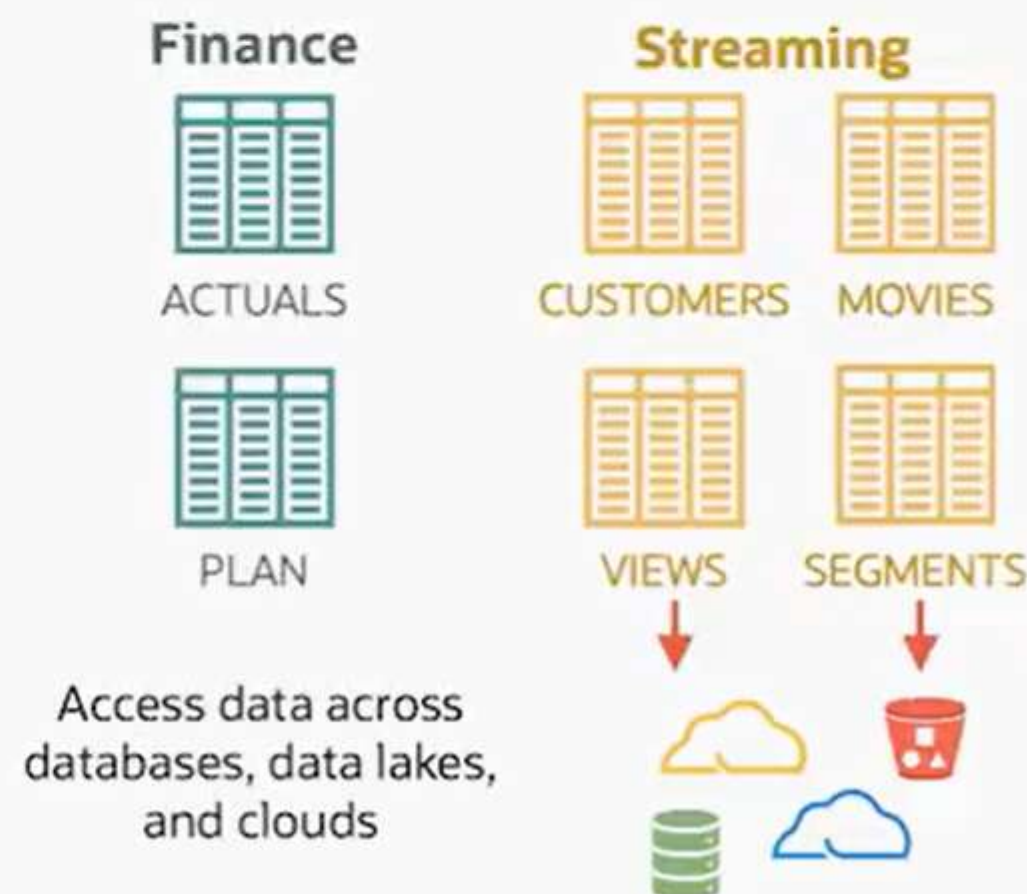
1

Choose an LLM to generate a database query from natural language.



2

Specify schemas, tables and/or views to participate in processing.



Easy to Configure Your Data for Natural Language Queries

Use one or more AI profiles that is best for your business.

- 1 Choose an LLM to generate a database query from natural language.
- 2 Specify schemas, tables and/or views to participate in processing.

Simple PL/SQL API creates AI profile:

```
dbms_cloud_ai.create_profile(  
  profile_name => 'movie_nl_processing',  
  attributes =>  
    '{"provider": "genai",  
     "credential_name": "GENAI_CRED",  
     "object_list": [{"owner": "myschema",  
                      "name": "movie"},  
                    {"owner": "myschema",  
                      "name": "sales_sample"},  
                    {"owner": "myschema",  
                      "name": "customer"} ]  
  }'  
);
```


SQL Query Generation Process Flow

