

Oracle Autonomous Database Tools

Autonomous Database Tools Overview

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ORACLE

Oracle Autonomous Database

Using the Cloud to eliminate the complexity of data management



Autonomous Database

- Oracle Database reimagined for the Cloud
- Completely automating the full database management lifecycle
- Supporting mission-critical databases
- Enabling you to innovate more, pay less, and ensure data security

Data Studio Tools

The screenshot displays the Oracle Data Studio interface. At the top, there's a header bar with the Oracle logo, 'Database Actions | Launchpad', and a search bar labeled 'Search Database (⌘+K)'. Below the header, a navigation bar includes tabs for 'Pinned & Recently Visited', 'Development' (which is active), 'Data Studio', 'Administration', 'Downloads', 'Monitoring', and 'Related Services'. On the left side, a sidebar lists various tools: SQL, Data Modeler, REST, Liquibase, JSON, Charts, Scheduling, Oracle Machine Learning, and APEX. The main workspace is titled 'SQL' and contains a text area with SQL code:

```
1 drop table demo_emp;  
2 drop materialized view demo_emp_mv;  
3  
4 create table demo_emp (  
5   id number primary key,  
6   name varchar2(255),  
7   sal number  
8 );  
9  
10 insert into demo_emp values(1, 'martin', 100);  
11
```

 Below the code editor, there's a 'Query Result' tab showing a table with columns 'EMPID', 'EMP_SAL', and 'EMP_NAME'. The table contains two rows: 'martin' with salary 100 and 'kelly' with salary 100. At the bottom of the interface, there's a status bar showing 'Elapsed: 00:00:00.004' and '2 rows selected'.

Autonomous as a Development Environment

Developer Tools out of the box with Autonomous

SQL Developer Web



- Execute SQL and PL/SQL
- Build Data Models, generate DDL statements
- Monitor and manage the DB

APEX



- Web-based Function rich, low code development env
- No client software needed

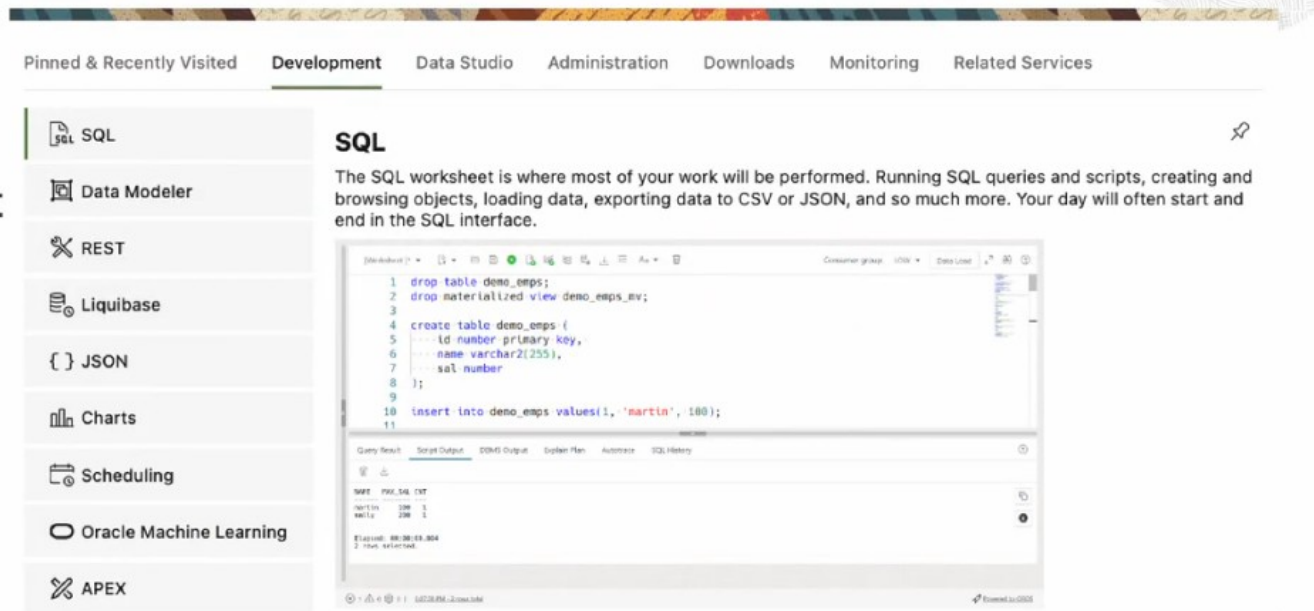
Oracle REST Data Services



- Ability to REST enable a schema and autogenerate REST endpoints for tables, views, and procedures

SQL Developer

- Run SQL statements
- Load data
- Database development
- Monitor and manage



The screenshot displays the Oracle SQL Developer application. The top navigation bar includes 'Pinned & Recently Visited', 'Development' (which is selected), 'Data Studio', 'Administration', 'Downloads', 'Monitoring', and 'Related Services'. On the left, a sidebar lists various tools: SQL, Data Modeler, REST, Liquibase, JSON, Charts, Scheduling, Oracle Machine Learning, and APEX. The main workspace is titled 'SQL' and contains a text editor with the following SQL script:

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1 drop table demo_emp;  
2 drop materialized view demo_emp_mv;  
3  
4 create table demo_emp (  
5     id number primary key,  
6     name varchar2(255),  
7     sal number  
8 );  
9  
10 insert into demo_emp values(1, 'martin', 180);  
11
```

Below the editor, there are tabs for 'Query Result', 'Script Output', 'DMS Output', 'Explain Plan', 'Autotrace', and 'SQL History'. The 'Query Result' tab is active, showing a table with columns 'ID', 'NAME', and 'SAL'. The table contains one row with the values 1, 'martin', and 180. The status bar at the bottom indicates 'Elapsed: 00:00:00.004' and '2 rows selected'.

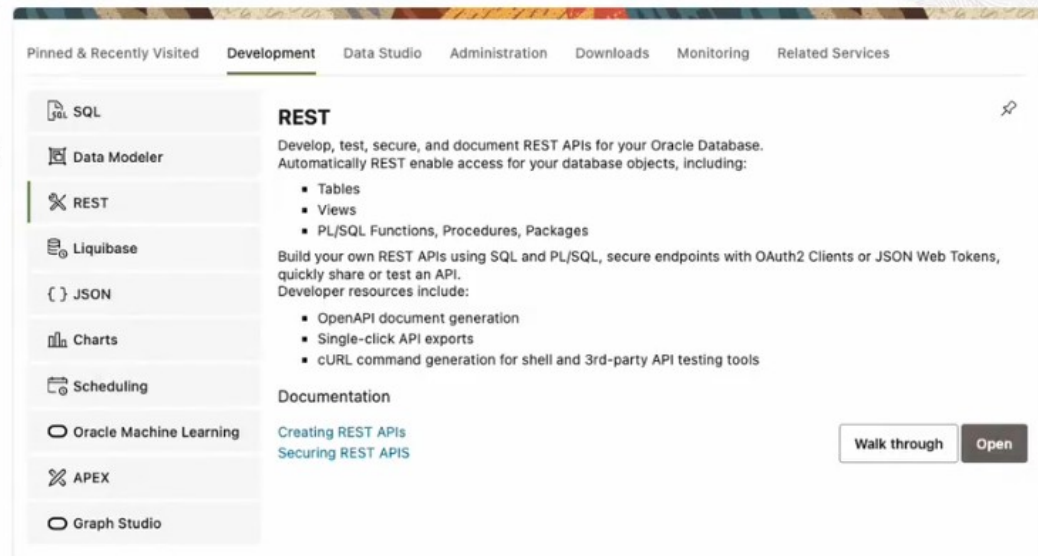
APEX

- Access APEX Applications
- Manage workspaces
- APEX Development

The screenshot displays the Oracle APEX Developer's Hub interface. At the top, a navigation bar includes links for 'Pinned & Recently Visited', 'Development' (which is the active tab), 'Data Studio', 'Administration', 'Downloads', 'Monitoring', and 'Related Services'. On the left side, there is a vertical menu with icons and labels for various tools: SQL, Data Modeler, REST, Liquibase, JSON, Charts, Scheduling, Oracle Machine Learning, APEX (highlighted with a blue bar), and Graph Studio. The main content area is titled 'APEX' and contains the text 'Login to APEX, develop and run rich, low-code web applications.' Below this, there is a dashboard with several widgets: 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A 'Top Apps' section shows a bar chart with 'SQL' at the top. A 'Top Users' section shows a bar chart with 'SQL' at the top. A 'Summary' section displays '0 Applications' and '0 Titles'. A 'Workspace Message' section shows 'No Workspace Messages'. On the right side, there is an 'About' section with a description of APEX and a 'Learn More' section with links to 'APEX Welcome', 'Blog', 'Tutorials', 'Videos', 'Education of Resources', 'Ideas & Feature Requests', and 'Open World'. At the bottom right, there is a dark button labeled 'Open'. Below the main content area, there is a 'Documentation' section with links for 'Get started' and 'Create APEX Developer Accounts'.

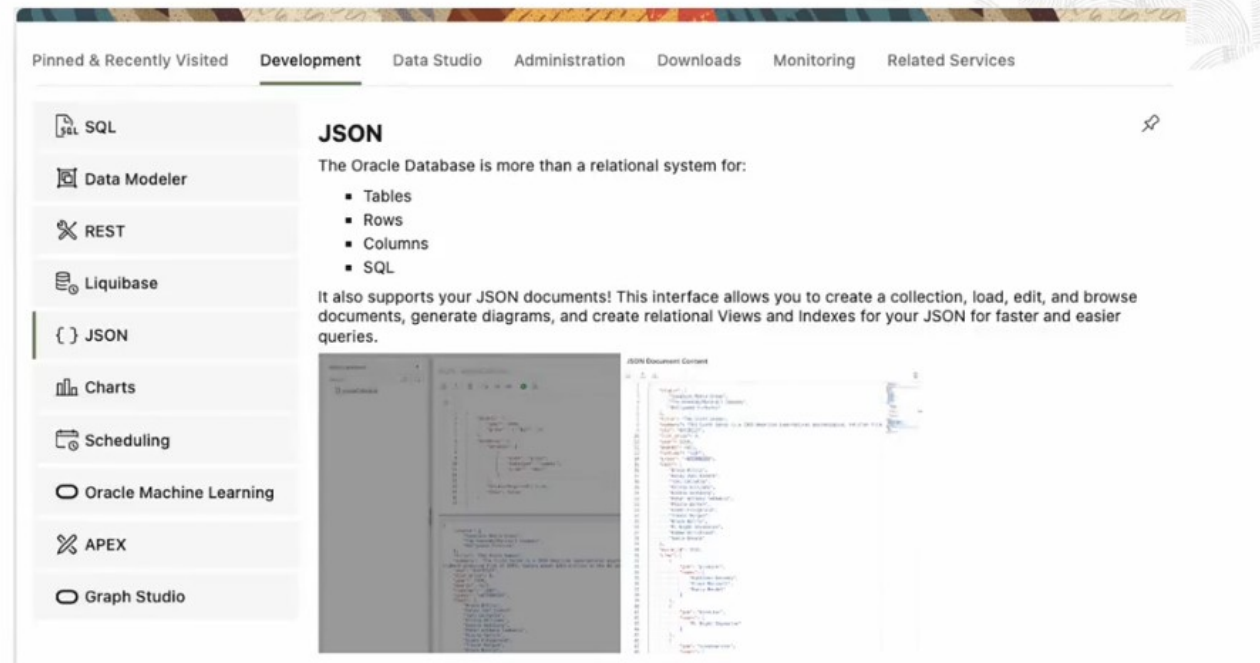
REST

- Define via PL/SQL API, SQL Dev or APEX
- Auto REST enable tables and views
- Create custom REST services
- Document Store (SODA for REST)
- Database Management REST APIs
- REST Enabled SQL



JSON

- Create collection
- Load and edit JSON
- Browse documents
- Create views



SQLcl

- Modern command-line interface
- Auto complete SQL syntax
- Command history
- Output json, csv, html, inserts, xml...
- Liquibase schema lifecycle integration
- Scripting friendly
- No Oracle Home required
- OCI & OSS Integration

```

        "manager_id" : 101,
        "department_id" : 110,
        "column1" : ""
    ),
    (
        "employee_id" : 206,
        "first_name" : "William",
        "last_name" : "Gietz",
        "email" : "WGIEZT",
        "phone_number" : "515.123.8181",
        "hire_date" : "07-JUN-94",
        "job_id" : "AC_ACCOUNT",
        "salary" : 17046.49,
        "commission_pct" : "",
        "manager_id" : 205,
        "department_id" : 110,
        "column1" : ""
    )
]
}
}
]
}
}
107 rows selected.

```

DEPARTMENT_ID	DEPARTMENT_NAME	EXTRA_COLUMN	LOCATION_ID	MANAGER_ID
10	ACCOUNTING		1100	101
11	MARKETING		1100	102
12	RESEARCH		1100	103
13	FINANCE		1100	104
14	OPERATIONS		1100	105
15	HR		1100	106
16	LEGAL		1100	107
17	COMPLIANCE		1100	108
18	IT		1100	109
19	CONTRACT MGMT		1100	110
20	SALES		1100	111
21	SALES		1100	112
22	SALES		1100	113
23	SALES		1100	114
24	SALES		1100	115
25	SALES		1100	116
26	SALES		1100	117
27	SALES		1100	118
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29	SALES		1100	120
30	SALES		1100	121
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88	SALES		1100	179
89	SALES		1100	180
90	SALES		1100	181

SQL Command Line

Data Studio Tools

ORACLE Database Actions | Data Studio Overview

Search

QTEAM

Get Started

Data Load

Load data from CSV, Excel, Parquet and other files on your local computer or cloud store into Autonomous Database.

Data Analysis

Quickly layer a dimensional model over your data using Analytic Views and view data using reports and charts.

Insights

Let the Database automatically search your data for outliers and anomalies. Find that needle in the haystack.

Catalog

Find data and understand dependencies between objects in the database. Know where your data comes from and where it is going.

Data Share

Quickly and securely share tables in your Autonomous Database with other users and Databases.

Recent Objects

DEVICES TABLE	MONTHS TABLE
ORDERS TABLE	DAYS TABLE
CUSTOMER_INTERACTIONS TABLE	COUNTRIES TABLE
CUSTOMER_CONTACT TABLE	REQUEST_INSIGHT_5 INSIGHT_REQUEST
REQUEST_INSIGHT_4 INSIGHT_REQUEST	REQUEST_INSIGHT_3 INSIGHT_REQUEST

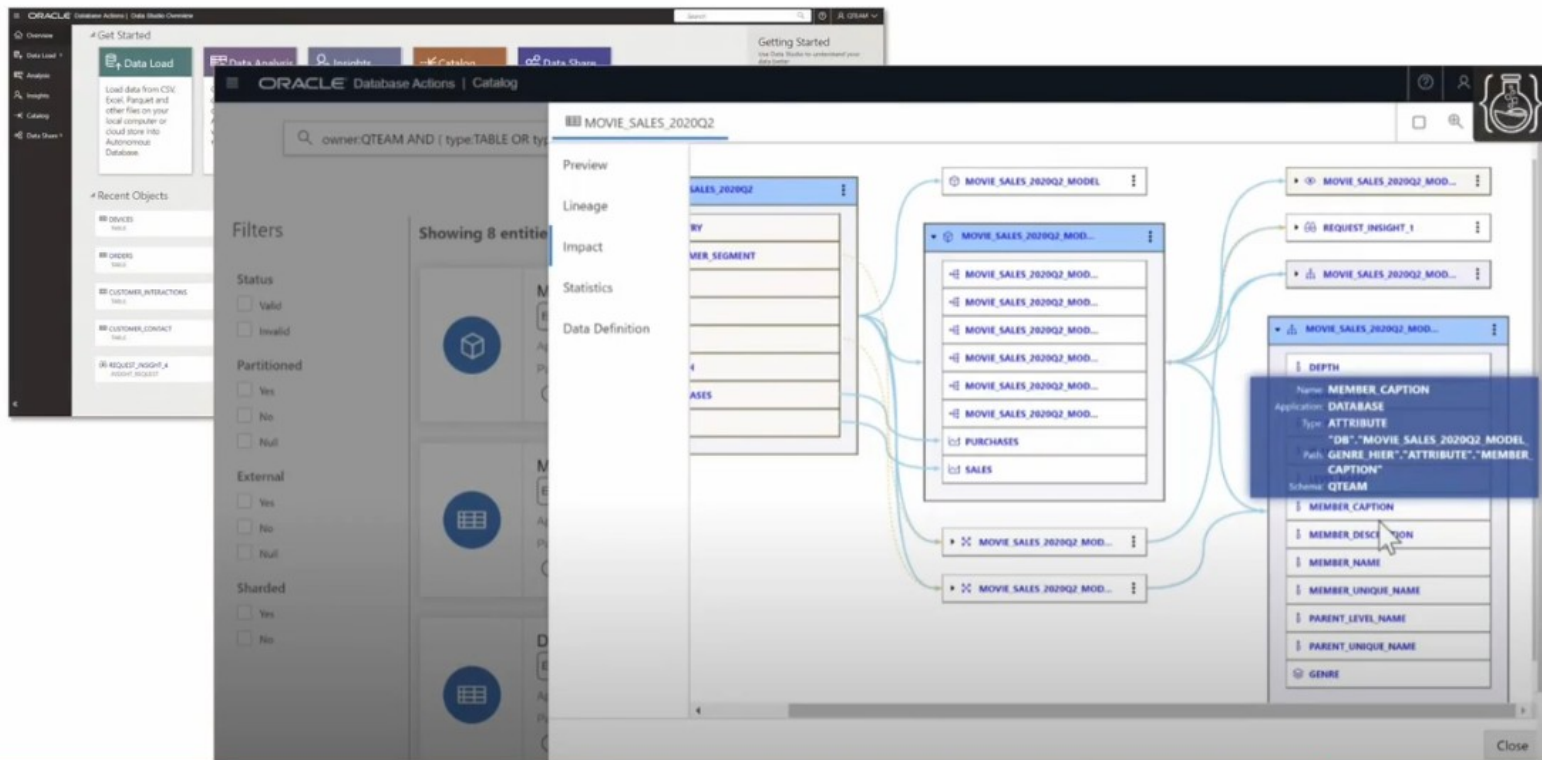
Getting Started

Use Data Studio to understand your data better

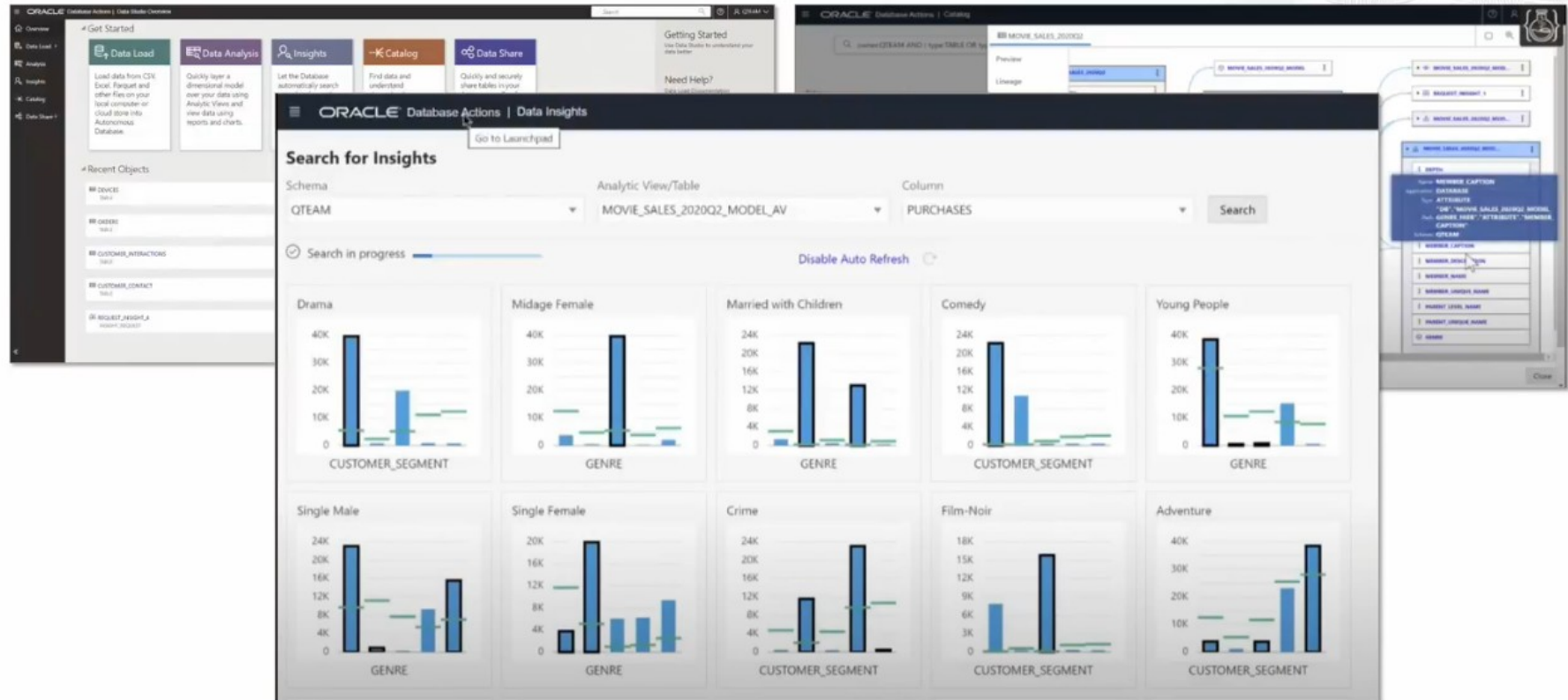
Need Help?

- Data Load Documentation
- Analysis Documentation
- Catalog Documentation
- Insights Documentation
- Database Actions Documentation
- Data Warehouse Insider Blog

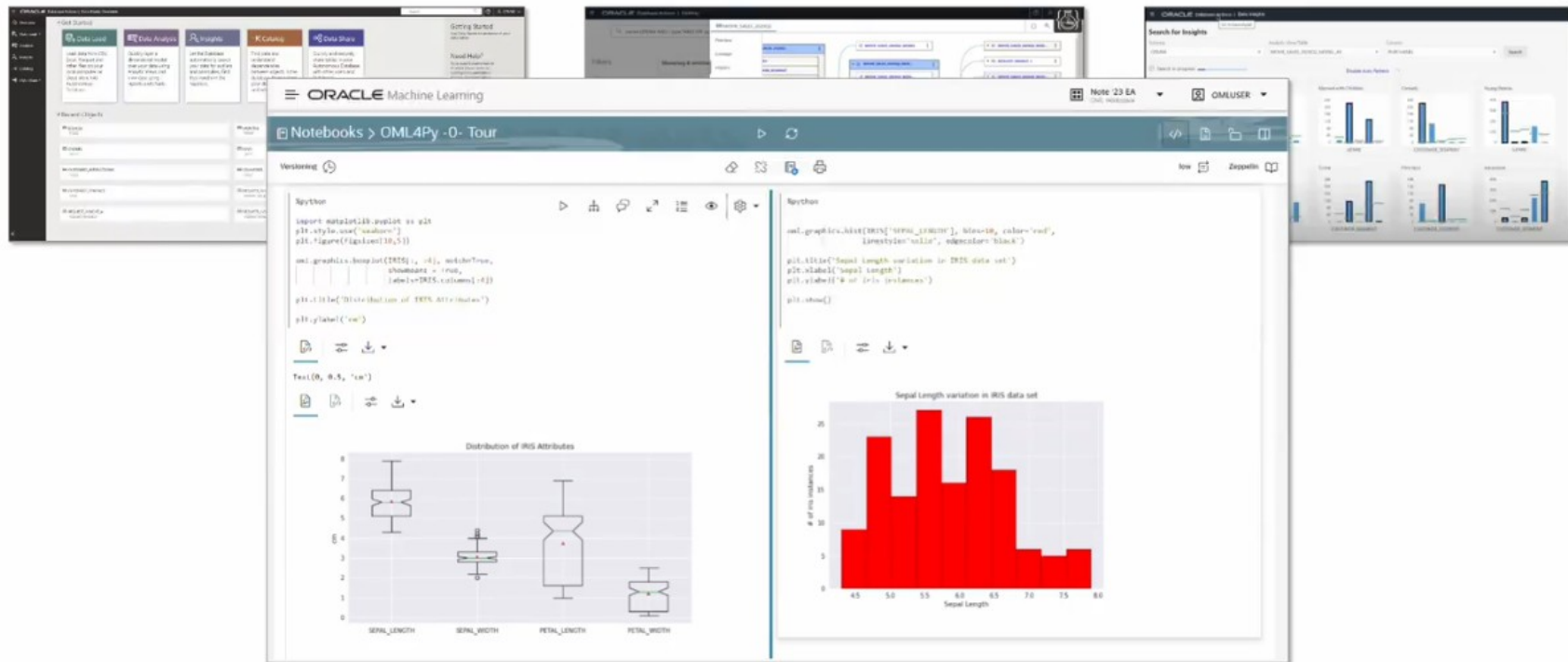
Catalog



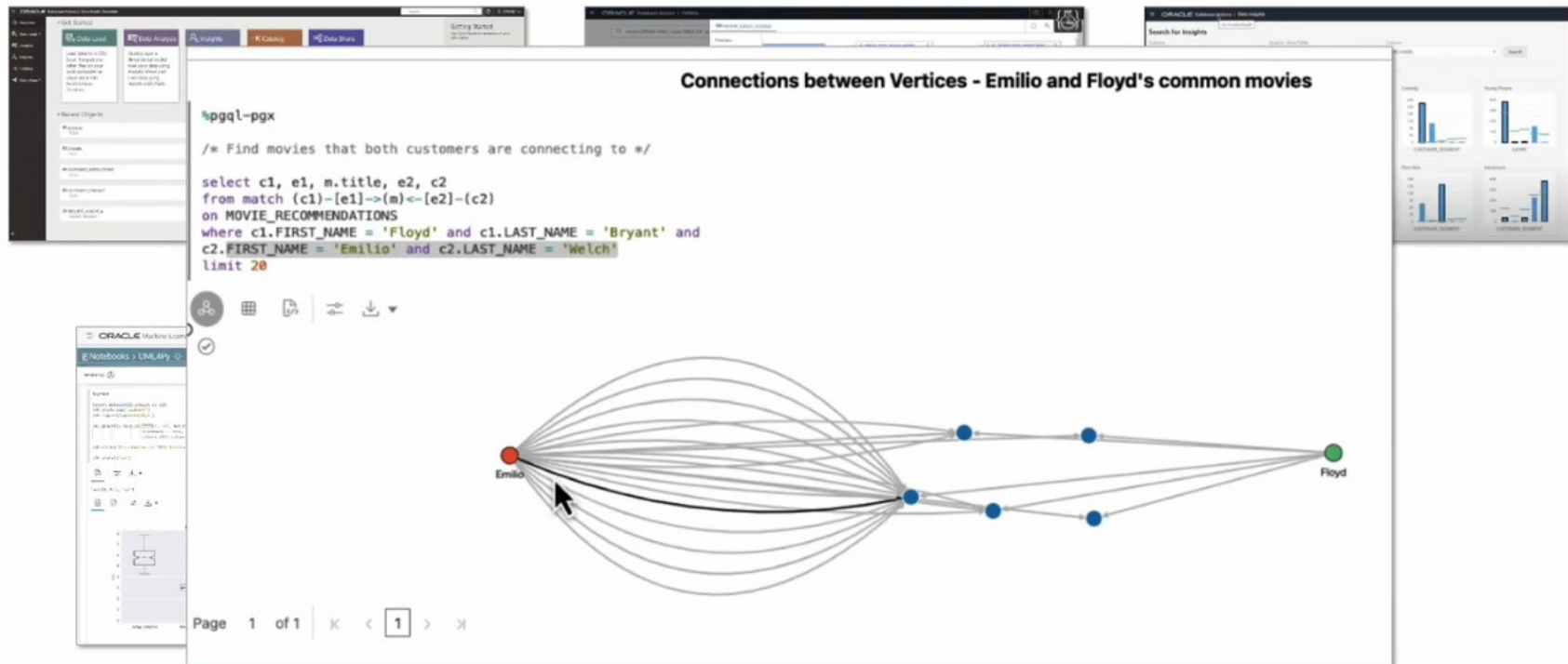
Insights



Machine Learning Notebooks



Graph Studio



Graph Studio

