ORACLE SELECT AI

How to enhance your application with smart use of Select AI
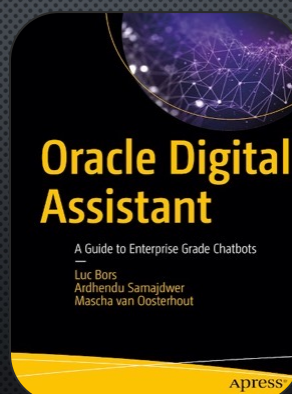
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APEX WORLD 2024
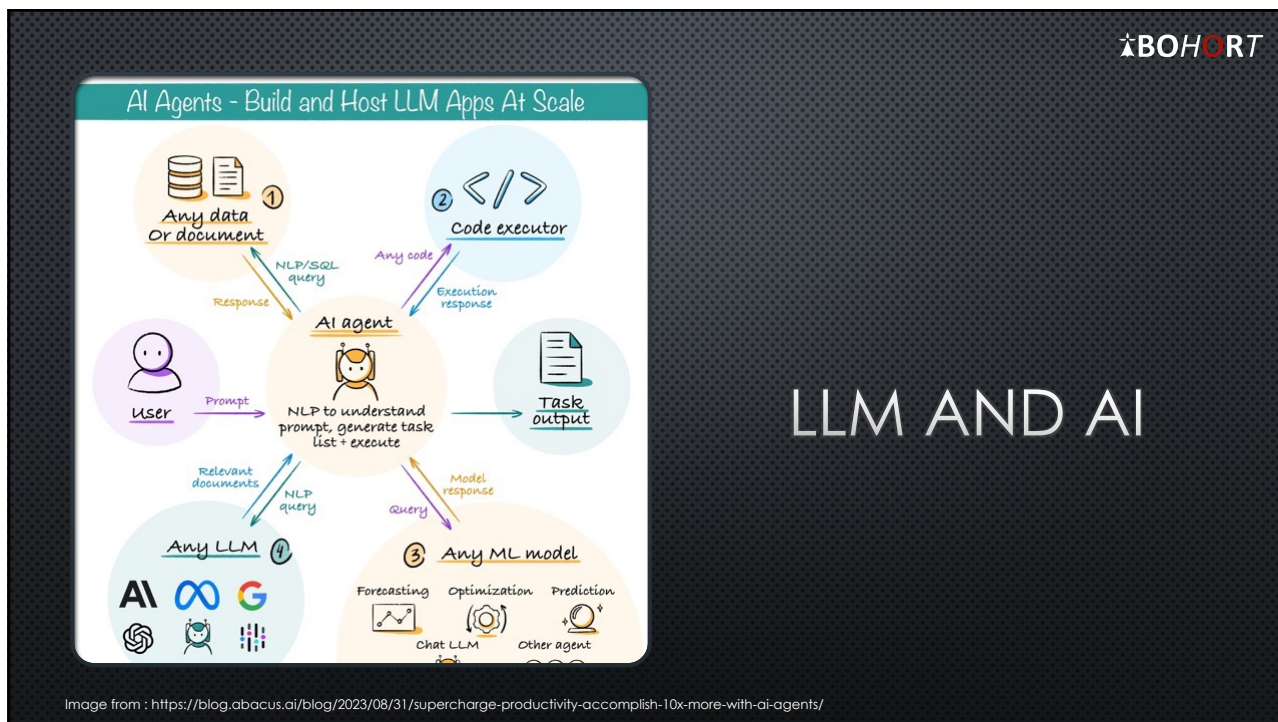
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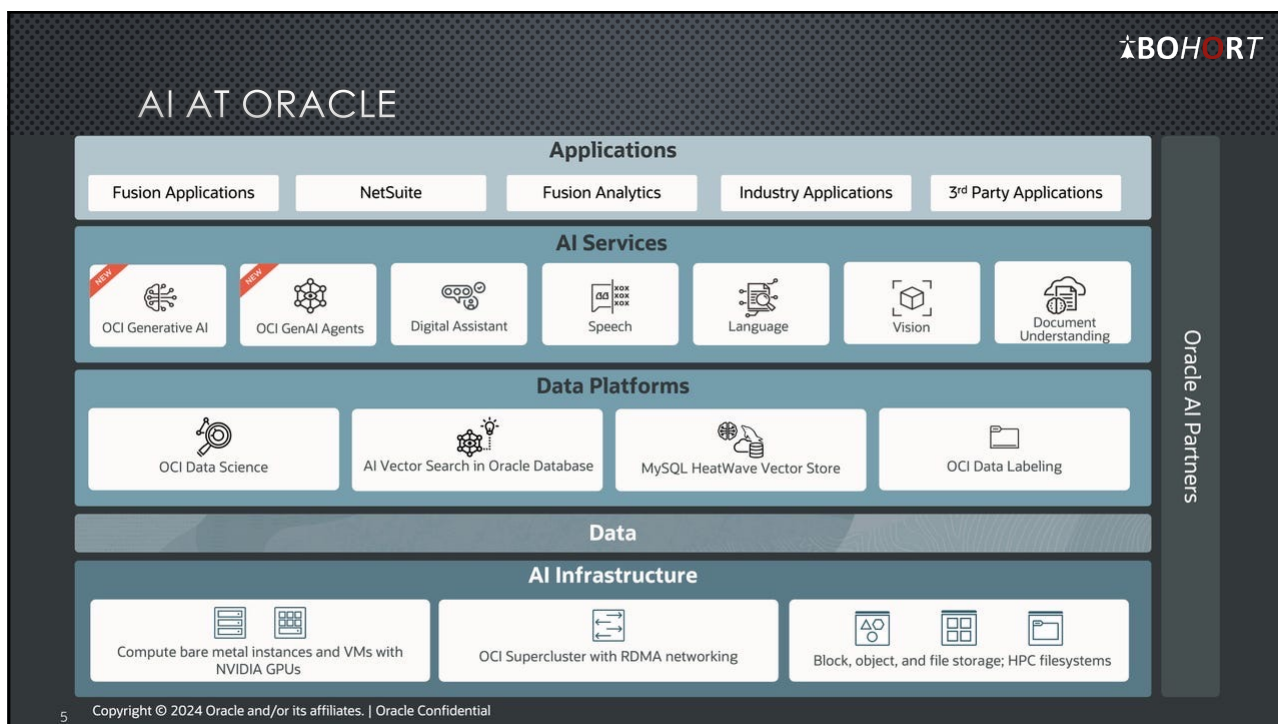**ᛏBO**H**OR**T   **ᛏBO**H**OR**T

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NEW TECHNOLOGIES

Oracle ACE Director

Oracle Digital Assistant

A Guide to Enterprise Grade Chatbots
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Luc Bors
Ardhendu Samajdwer
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ORACLE

Oracle Mobile Application Framework Developer Guide

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Image from : https://blog.abacus.ai/blog/2023/08/31/supercharge-productivity-accomplish-10x-more-with-ai-agents/
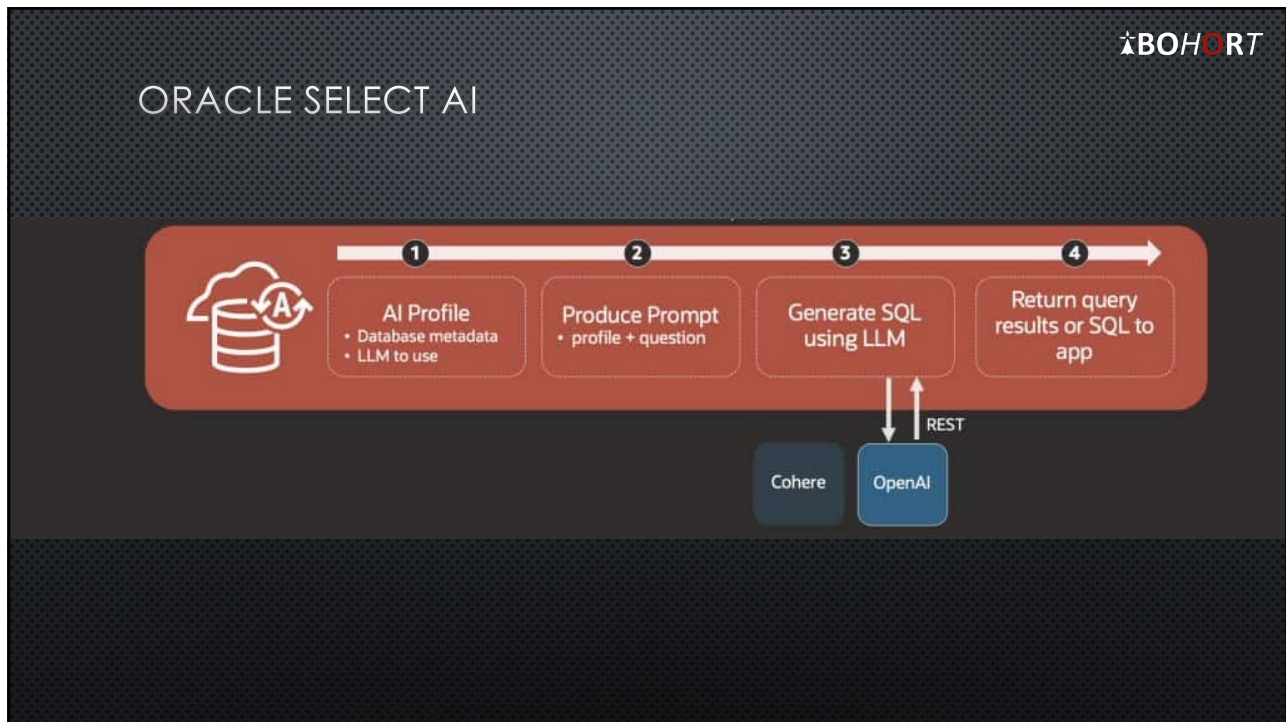
LLM AND AI
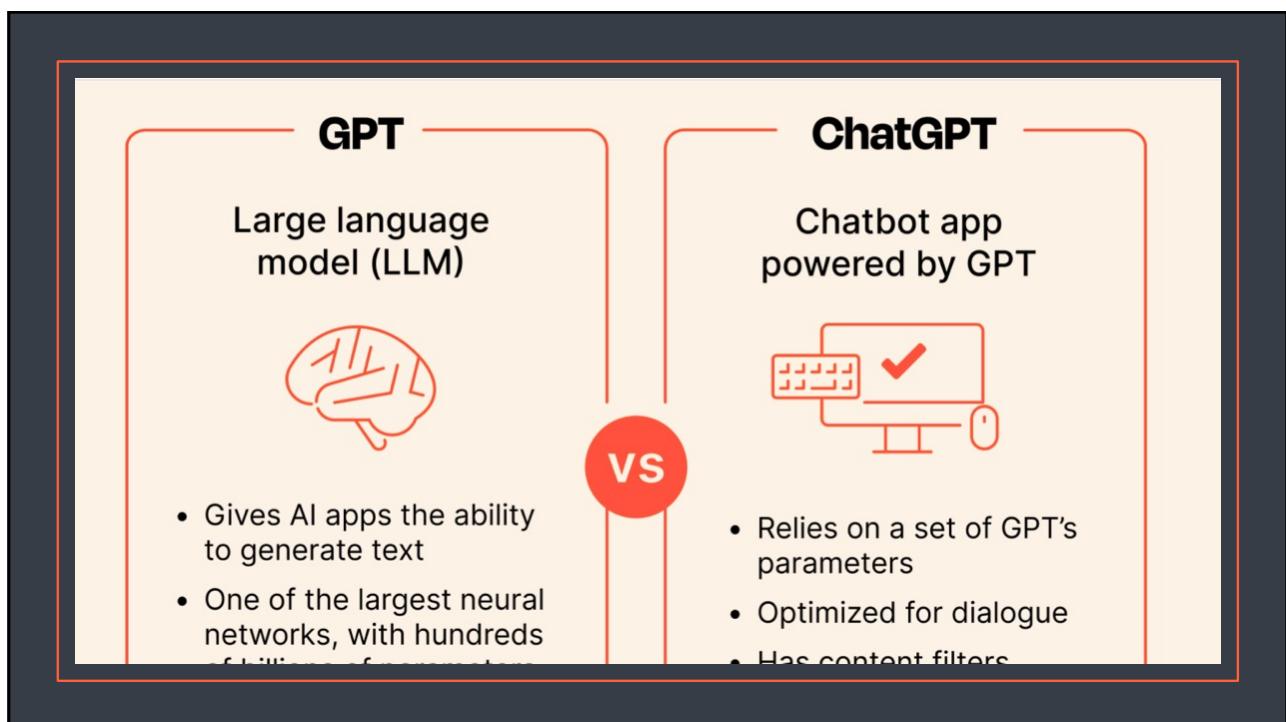
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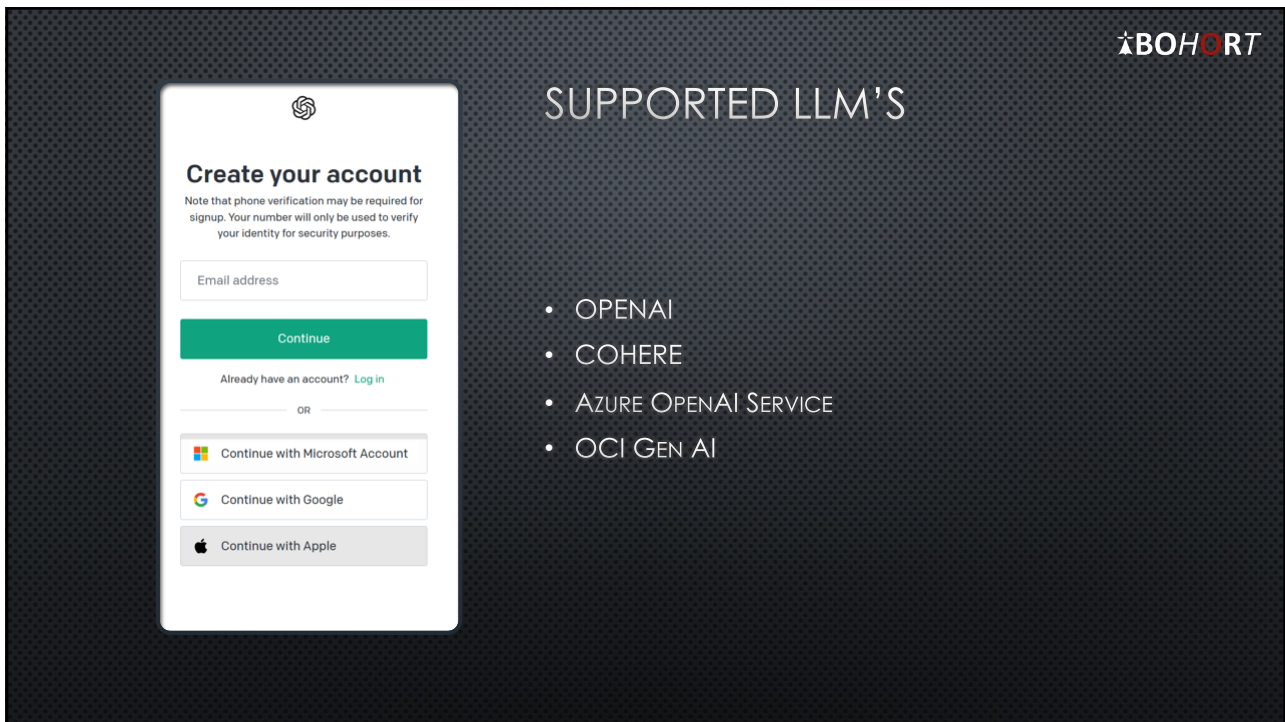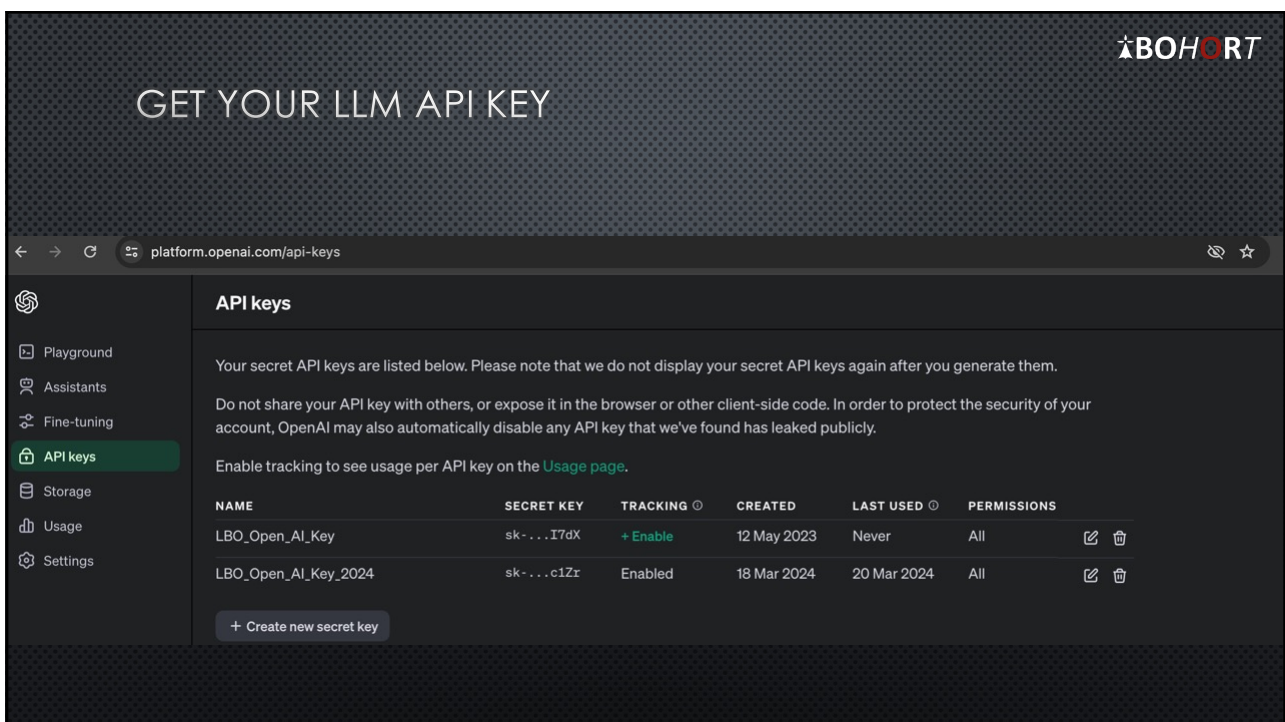

AI AT ORACLE

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SETUP ORACLE SELECT AI

```
BEGIN
DBMS_NETWORK_ACL_ADMIN.APPEND_HOST_ACE (
   HOST          => 'API.OPENAI.COM',
   LOWER_PORT    => 443,
   UPPER_PORT    => 443,
   ACE           => XS$ACE_TYPE(
       PRIVILEGE_LIST => XS$NAME_LIST('HTTP'),
       PRINCIPAL_NAME => 'MOVIESTREAM',
       PRINCIPAL_TYPE => XS_ACL.PTYPE_DB));
END;
/
```

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SETUP ORACLE SELECT AI

```
GRANT EXECUTE ON DBMS_CLOUD_AI TO <USER>;
```

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SETUP ORACLE SELECT AI

```
BEGIN
  DBMS_CLOUD.DROP_CREDENTIAL (
    CREDENTIAL_NAME  => 'OPENAI_CRED');


  DBMS_CLOUD.CREATE_CREDENTIAL(
    CREDENTIAL_NAME => 'OPENAI_CRED',
    USERNAME => 'OPENAI',
    PASSWORD => 'ENTER-YOUR-LLM-SECRET-KEY-HERE' );
END;
```

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SETUP ORACLE SELECT AI

```
BEGIN
DBMS_CLOUD_AI.CREATE_PROFILE(
    PROFILE_NAME => 'OPENAI_GPT35',
    ATTRIBUTES => '{"PROVIDER": "OPENAI",
                "CREDENTIAL_NAME": "OPENAI_CRED",
                "OBJECT_LIST":
                [{"OWNER": "MOVIESTREAM", "NAME": "MOVIES"},
                ........................
                {"OWNER": "MOVIESTREAM", "NAME": "PIZZA_SHOP"},
                {"OWNER": "<OWNER-NAME>", "NAME": "<OBJECT-NAME"},
                {"OWNER": "] }'
);
END;
/
```

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SETUP ORACLE SELECT AI

iBOHORT

```
BEGIN
    DBMS_CLOUD_AI.SET_PROFILE(PROFILE_NAME => 'OPENAI_GPT35');
END;
```

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DEMO OF ORACLE SELECT AI
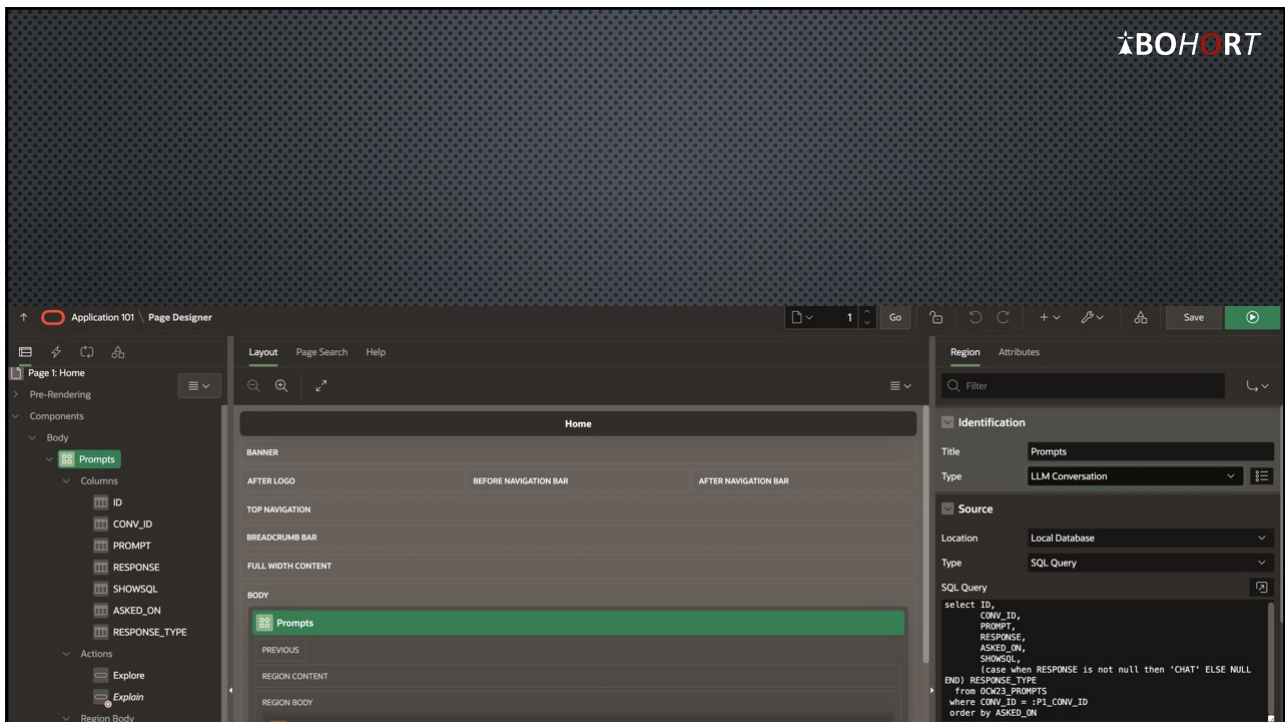
iBOHORT

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USE ORACLE SELECT AI IN YOUR APPLICATIONS

- IN APEX YOU CAN USE DBMS_CLOUD_AI.GENERATE FUNCTION.

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DBMS_CLOUD_AI.GENERATE(

       PROMPT => 'WHAT IS THE TOTAL NUMBER OF CUSTOMERS',

       PROFILE_NAME => 'OPENAI_GPT35',

       ACTION => 'SHOWSQL')

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DEMO OF ORACLE SELECT AI

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SIDENOTE REGARDING "NARRATE"

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WARNING: Large language models (LLMs) have been trained on a broad set of text documentation and content, typically from the Internet. As a result, LLMs may have incorporated patterns from invalid or malicious content, including SQL injection. Thus, while LLMs are adept at generating useful and relevant content, they also can generate incorrect and false information including SQL queries that produce inaccurate results and/or compromise security of your data.
The queries generated on your behalf by the user-specified LLM provider will be run in your database. Your use of this feature is solely at your own risk, and, notwithstanding any other terms and conditions related to the services provided by Oracle, constitutes your acceptance of that risk and express exclusion of Oracle's responsibility or liability for any damages resulting from that use.

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BENEFITS AND LIMITATIONS

- THE SQL IS SPECIFIC TO YOUR DATABASE TABLES.

- DESPITE HOW WELL LLMS PERFORM — EVEN WITH AUGMENTED PROMPTS — THEY'RE NOT PERFECT. AS SUCH, THE RESULTS AND POSSIBLY THE CORRESPONDING QUERIES SHOULD BE REVIEWED BEFORE RELYING ON THE RESULTS.

- THE WAY YOU WRITE THE PROMPT — AS WITH ANY LLM INTERACTION — CAN HAVE A SIGNIFICANT EFFECT ON THE OUTPUT.

- META DATA!!!

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HALLUCINATION

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SUMMARY

- Autonomous Database Select AI supports the following ways to use an LLM from SQL:
  - Run SQL using a natural language prompt
  - Show the SQL statement generated from natural language prompt
  - Convey SQL results in a natural language narrative
  - Chat with your LLM

- Select AI serves as a productivity tool for SQL and application developers

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