



Accelerating AI Agent Development with Oracle's Data Platform

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Safe harbor statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.

Speakers



Jean-Rene Gauthier

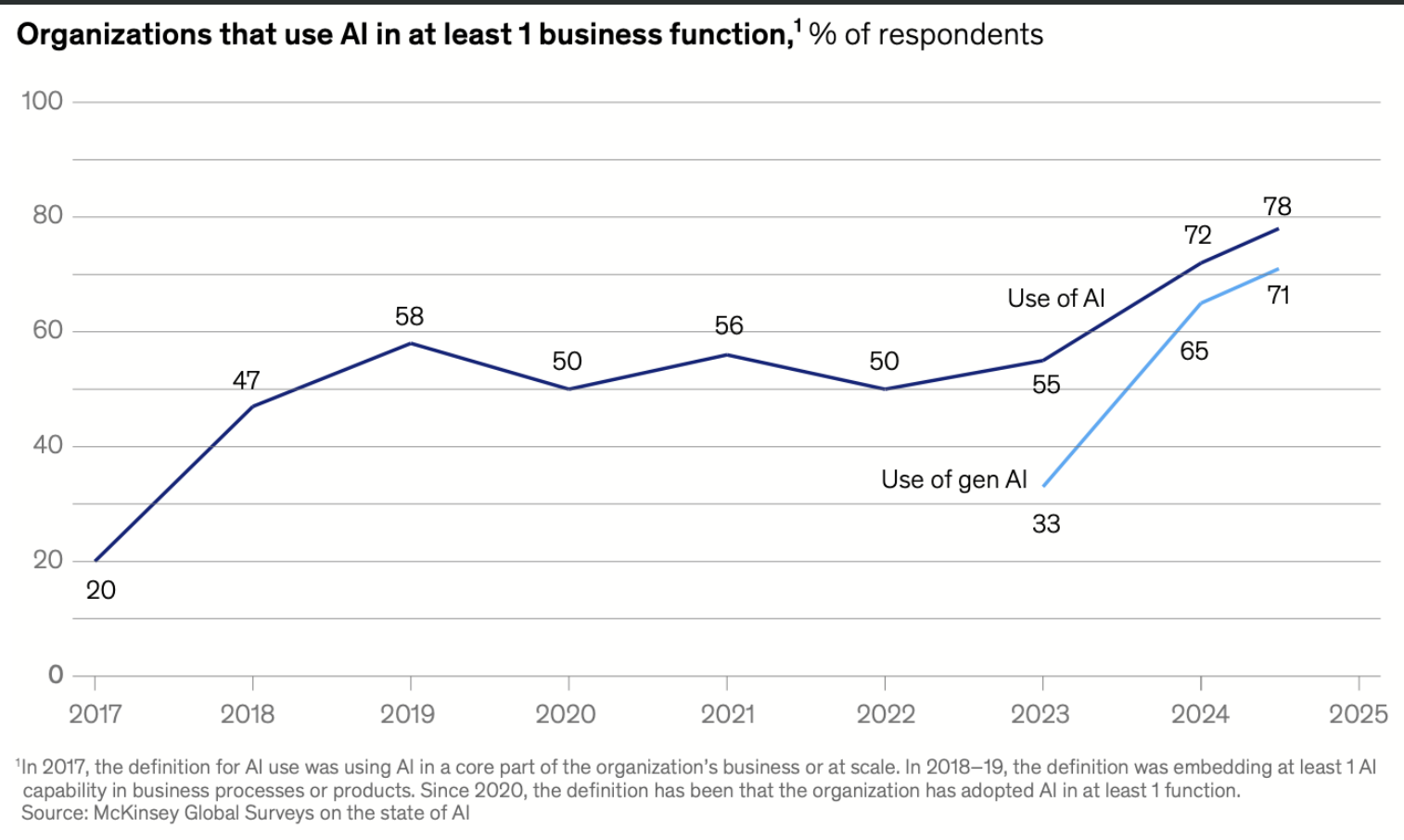
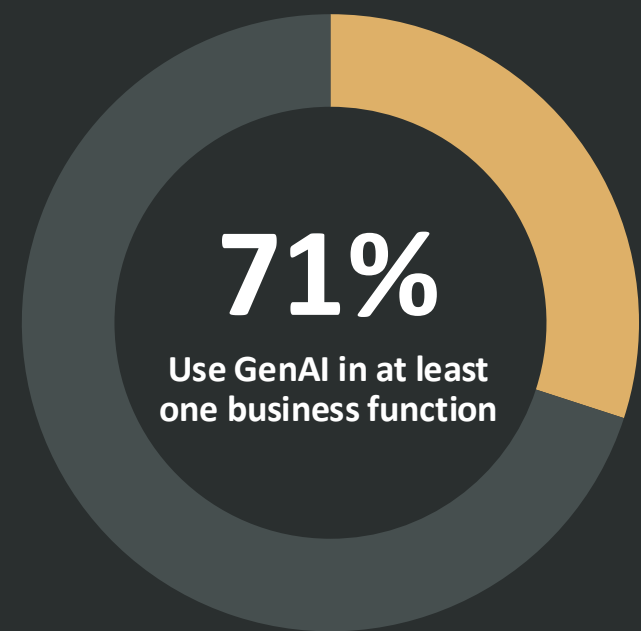
Product Manager, Oracle



Colin Schmidt

Vice President Engineering, Oracle

GenAI adoption is climbing... and fast!



Source: McKinsey & Company, 2025



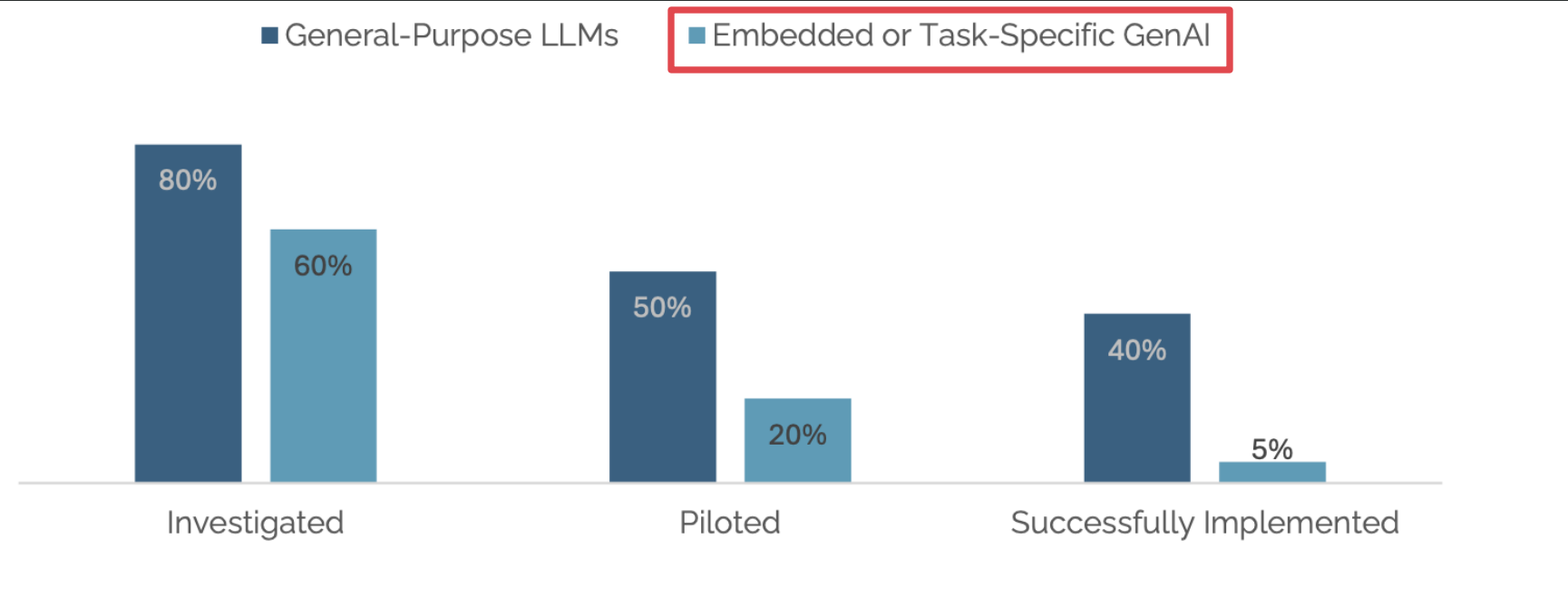
yet...

1%

of company executives describe their gen AI rollouts as mature

Source: McKinsey & Company, 2025

But ChatGPT is great!



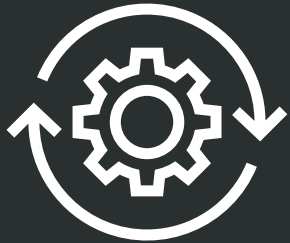
For general purpose, adoption of GenAI through "unofficial channels" is very high... and successful!

Source: MIT NANDA, 2025



So why do task-specific AI agents fail?

Generic tools lack persistent memory and feedback loops



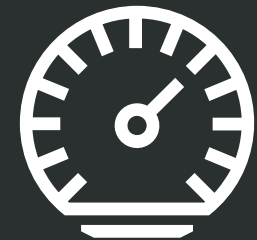
Agent needs deep customization aligned to internal data



Agent benchmarks need to be aligned with operational outcomes



Agents should be optimized for specific processes



Source: MIT NANDA, 2025

ANNOUNCING

Oracle AI Data Platform

Empowering enterprises to build AI Agents and applications by uniting their enterprise data with best-in-class AI models and developer tools - driving innovation, efficiency, and competitive advantage.



Oracle AI Data Platform

Unified platform for lakehouse foundation, AI Agents, Tools, and business applications — built with enterprise-grade data and AI governance.

Oracle AI Data Platform

Agentic User Experience

Chat

Insights

Workflows

AI Powered Developer Tools

Analytics

AI Agents

Data Engineering

Data Science

Data and AI Foundation

AI Models & Frameworks

Oracle DB & Open-Source Engines

Data and AI Catalog

Open Lakehouse Architecture

Oracle AI Data Platform

Agentic User Experience

Chat

Insights

Workflows

AI Powered Developer Tools

Analytics

AI Agents

Data Engineering

Data Science

Data and AI Foundation

AI Models & Frameworks

Oracle DB & Open-Source Engines

Data and AI Catalog

Open Lakehouse Architecture



**Oracle AI
Data Platform**
Workbench

Data Integration

Data Engineering

Data Science

Orchestration

Agent Studio

Catalog and Governance



Oracle AI Data Platform Workbench

Data Integration

Data Engineering

Data Science

Orchestration

Agent Studio

Catalog and Governance



AI Data Platform Workbench is a comprehensive developer environment for **data engineers, data scientists, developers, data stewards** to build and govern lakehouse foundations, AI applications and agents



Data Platform

- **Multiple Data Integration Options**
 - Direct connectivity to multiple systems
 - Integrations with ADB, GoldenGate, MySQL Heatwave and OAC
 - FDI, EBS, Health
- **Unified Catalog, Governance, and Lineage**
 - Discover, organize, and govern all data and AI assets in a unified catalog across structured, semi-structured, and unstructured sources.
- **Support for Data Engineering and Data Science Workloads**
 - Notebooks, distributed processing, and model training on Spark clusters, unified workload management

Master Catalog

Contains all the standard and external catalogs

Catalogs Details Permissions History

Filter

| <input type="checkbox"/> | Catalog name | Catalog type | Source | Created on | Created by | |
|--------------------------|---------------------|------------------|-----------------------|---------------------------------|-----------------------|-----|
| <input type="checkbox"/> | Default | Standard Catalog | Intelligent Data Lake | Wed, May 22, 2023, 12:18:06 UTC | System | ... |
| <input type="checkbox"/> | Bronze | Standard Catalog | Intelligent Data Lake | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |
| <input type="checkbox"/> | Silver | Standard Catalog | Intelligent Data Lake | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |
| <input type="checkbox"/> | Gold_ADW | Standard Catalog | Intelligent Data Lake | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |
| <input type="checkbox"/> | Auto Repair Catalog | Standard Catalog | Intelligent Data Lake | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |
| <input type="checkbox"/> | FDI | External Catalog | FDI | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |

Demo: Master Catalog

AI Agents in AI Data Platform





AIDP Agent Development

- **Low-Code and Code-First AI Development**

Develop AI agents, tools, and applications using visual tools and/or notebook.

- **OCI Generative AI + Oracle 23ai Integration**

Leverage best-in-class LLMs and AI services.

- **Oracle 23ai Vector Store Integration**

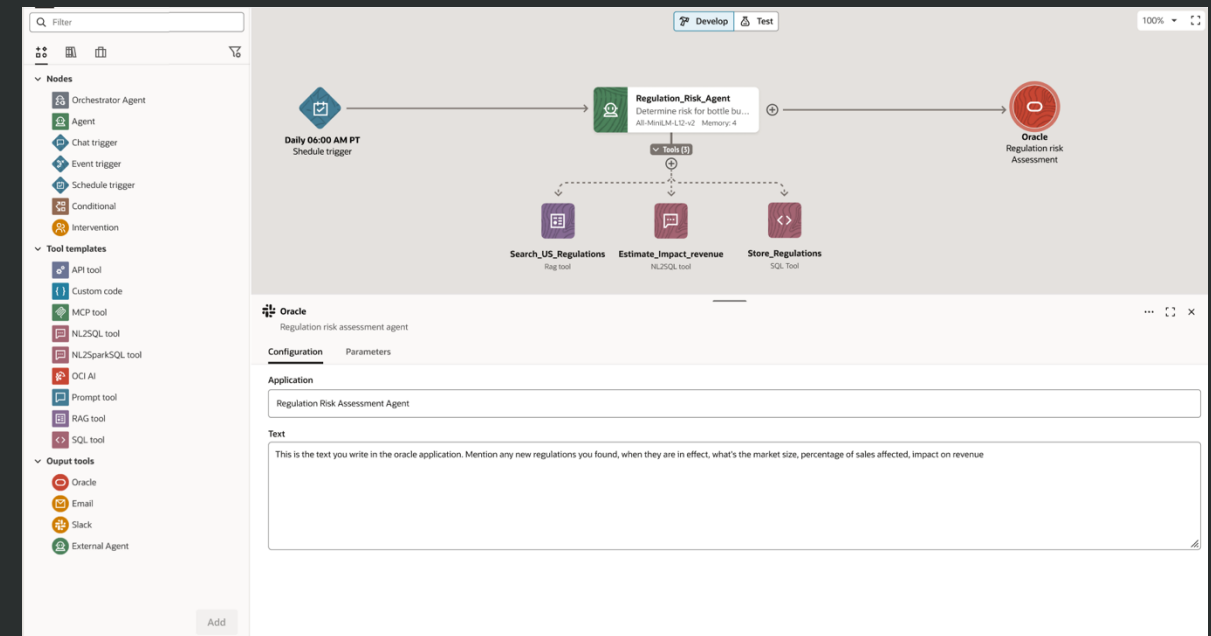
Store, manage, and query enterprise knowledge using vector search, linked to the master catalog.

- **Lifecycle Management for AI Assets**

Register, version, test, and promote AI agents with full governance.

- **Fusion AI Agent Studio Integration**

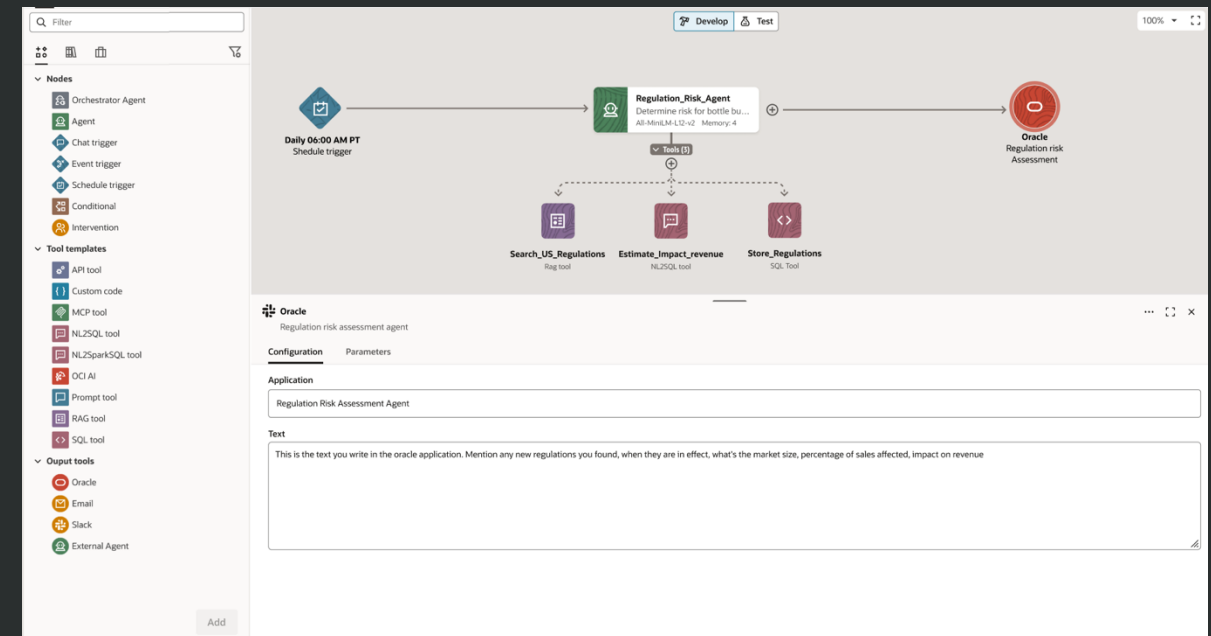
Embed custom agents directly into Oracle SaaS apps.





Agent Flows

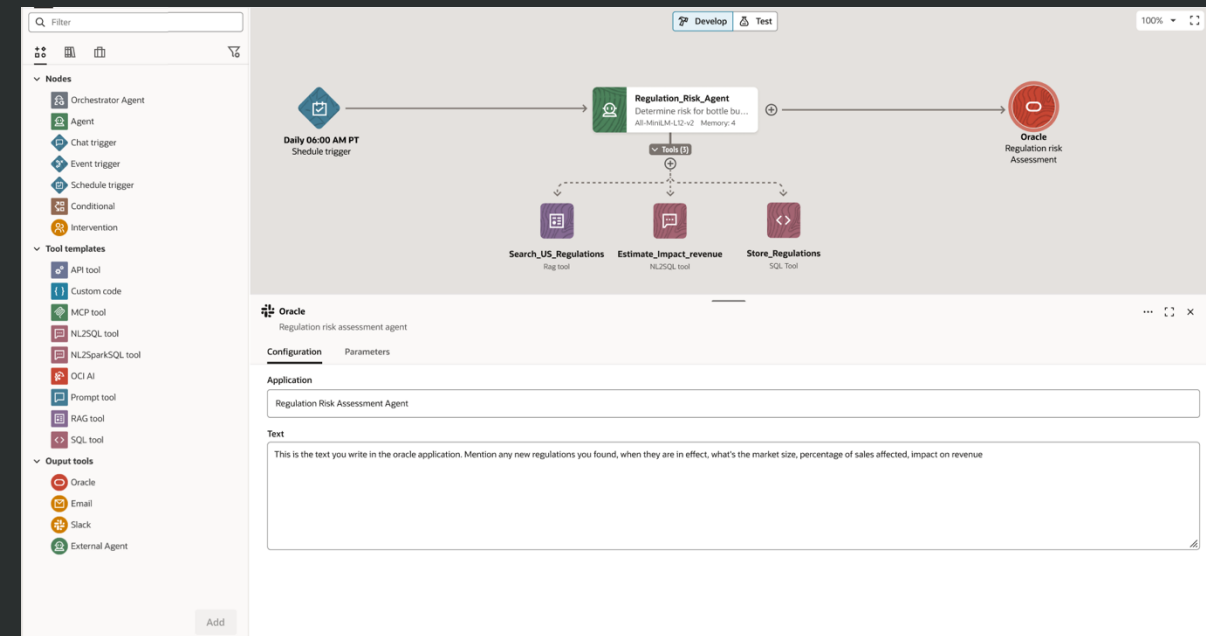
- Agent flows are E2E agentic applications that are core AI artifacts in AI Data Platform.
- Agent flows are defined through a graph of steps represented by nodes of different types (agents, tools, if/else condition, trigger, code, etc) and relationships
- Contrary to standard single- or multi-agent applications, agent flows let you orchestrate complex applications by mixing non-deterministic components (e.g. AI agents) with deterministic controls (e.g. triggers, code, conditional nodes)
- **Agent flows are designed to increase agentic applications reliability and predictability.**



Agent Flows

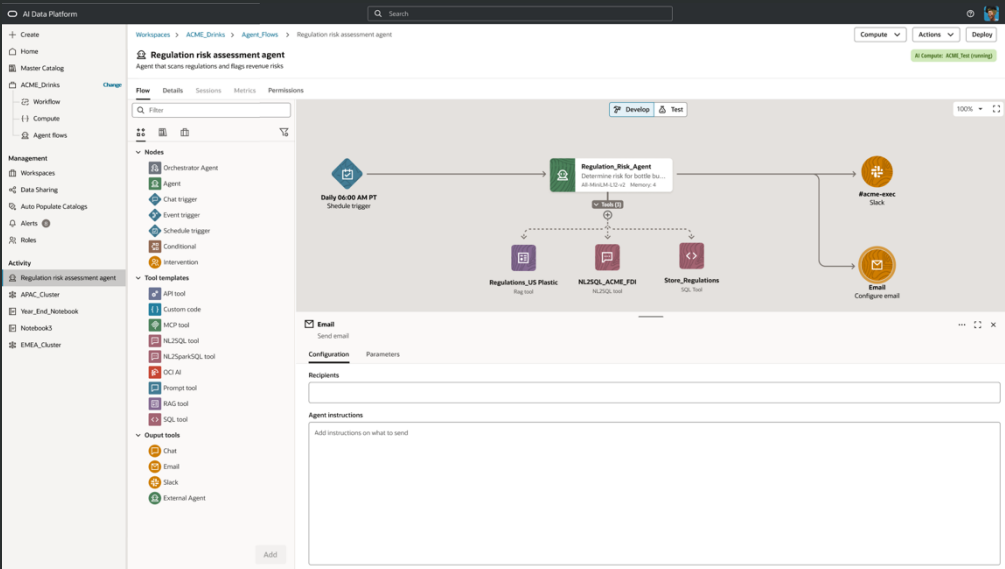


- Agent flows bring the best of agentic and Flexible application design which supports a variety of scenarios including:
 - Single agent with tools
 - Multi-agent systems
 - Partially deterministic execution through combinations of agent, code, trigger, and conditional nodes
- Supported node types include:
 - Trigger
 - chat, schedule-based, event-triggered, ad hoc
 - Conditional
 - If/else, branch split, etc
 - Code
 - custom code execution processing the output of another node
 - Agents
 - Tools

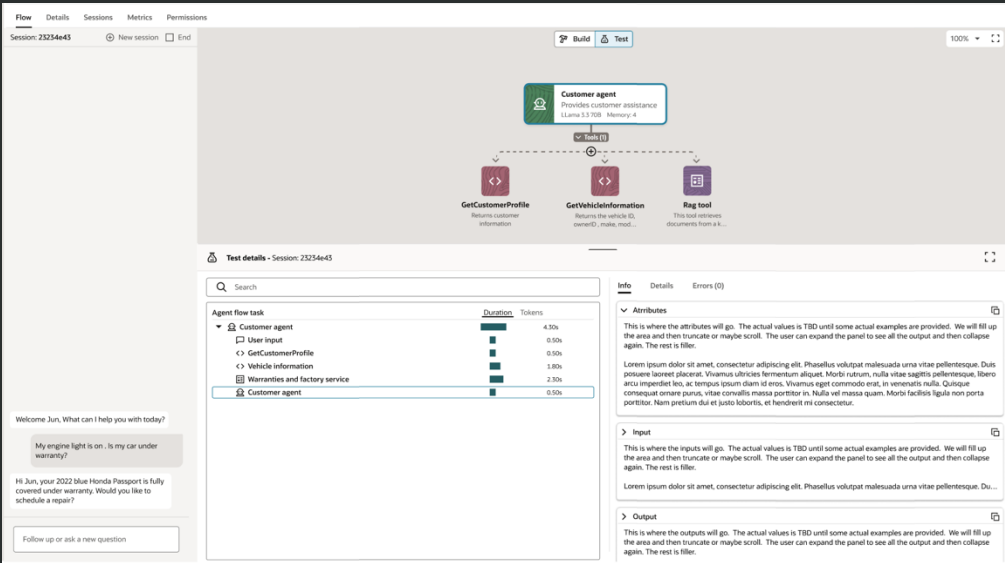


Agent Flow Building, Testing, and Debugging

- Building agent flows is a highly iterative process. AIDP reduces the friction.
- Support both no-code, canvas-style agent flow definition as well as code definition through LangGraph
- Options to quickly iterate on your agent flow through “build” and “test” panels
- Changes made to the agent flow in the “build” phase are immediately available for testing through a comprehensive testing playground.



Building

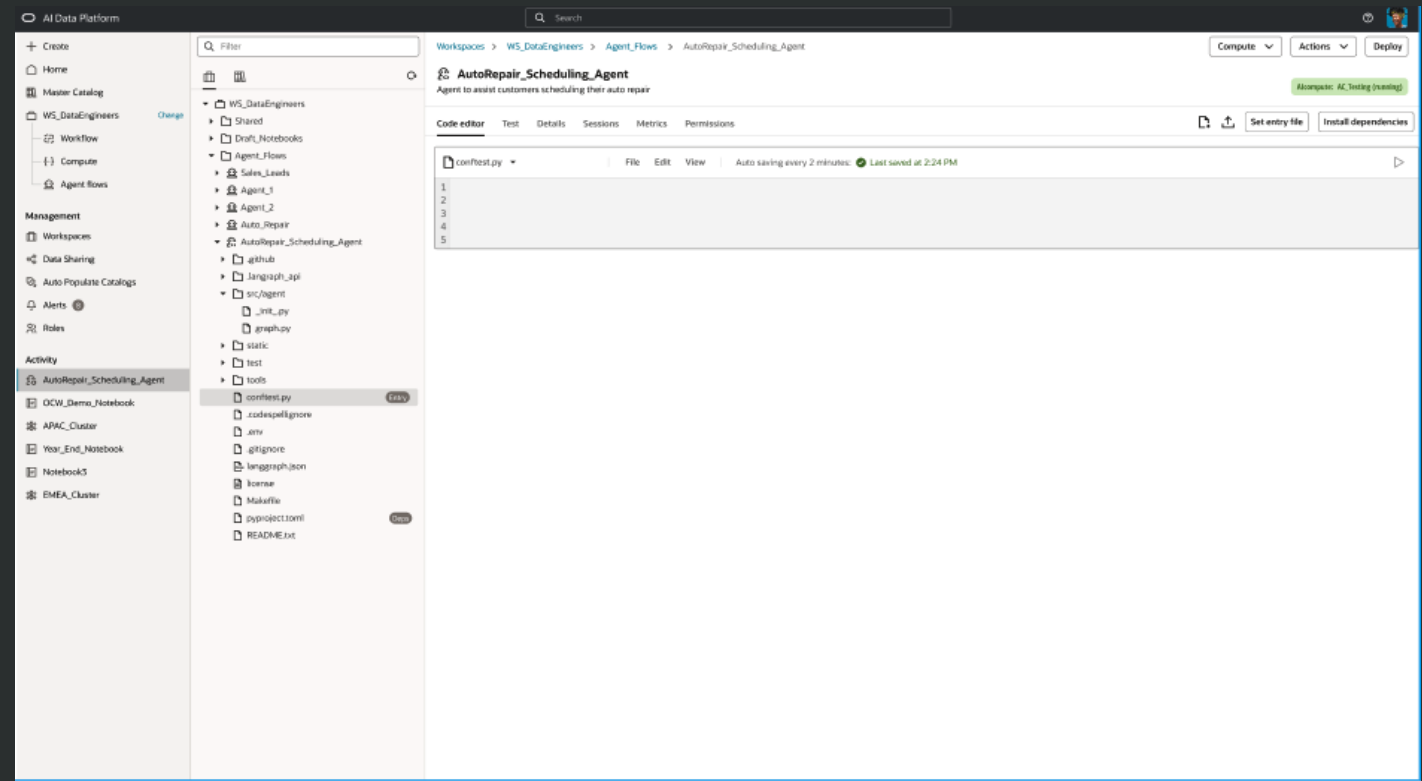


Testing

Agent Flow Coding Experience



- Upload LangGraph app and/or author in AIDP Python editor
- Use AIDUtils library to integrate Gen AI LLMs, Guardrails, Tools, Memory and Observability
- Define agent flow entry point file
- Configure a list of third-party Python dependencies
- Run and debug with a unified testing playground experience





Powered by Frontier LLMs from OCI Gen AI Service

- Select SOTA LLMs from the OCI GenAI service in your agent flow definition
- Configure the model parameters and provide detailed prompts to the agent including the objective, tasks, role, and any other relevant instructions.
- Configure tools and give your agent flow access to your data in AI Data Platform





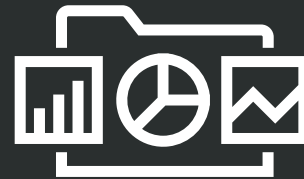
Configurable Tool Templates available Out of the Box

Reduce variance and give your agent flows the skills to access your valuable data



SQL Tool

Parametrize custom SQL queries to let your agent flows access data in AIDP catalog schemas.



Retrieval Augmented Generation Tool

Connect to knowledge bases and Search through files stored in AIDP volumes.



Prompt Tool

Give your agent access to prompt templates for email, notification, document summarization, etc.



Protect your Agent Flow with Strong, Configurable Guardrails

- Ensuring that the agent flow behave according to expectations is paramount to AIDP
- AIDP provides **strong, default guardrails** that protects your agent flows against toxic and malicious content.
- Guardrails can also be configured and include:
 - Strong content moderation across multiple categories of harmful content: Hate speech, Harassment, Violence, Sexual, Derogatory, Toxic
 - Prompt injection
 - Apply for each **user query and/or model response**
 - Control if/how PII data are displayed in the query or the response
- Control the action to take by selecting between blocking the content, informing the end user or masking the PII content

Customer Agent
Provides customer assistance

Configuration

Model parameters

Safety Guardrails

Content moderation prevention

| <input checked="" type="checkbox"/> Entity type | Action | ... | Threshold (0-1) | ... |
|---|---|-----|-----------------|-----|
| <input checked="" type="checkbox"/> Hate speech | <input checked="" type="radio"/> Block <input type="radio"/> Inform | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Harassment | <input checked="" type="radio"/> Block <input type="radio"/> Inform | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Violence | <input checked="" type="radio"/> Block <input type="radio"/> Inform | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Sexual | <input checked="" type="radio"/> Block <input type="radio"/> Inform | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Derogatory | <input checked="" type="radio"/> Block <input type="radio"/> Inform | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Toxic | <input checked="" type="radio"/> Block <input type="radio"/> Inform | | .5 | ▼ ▲ |

Prompt attacks prevention

☒ Block ☐ Inform

PII detection

| <input checked="" type="checkbox"/> Entity type | Action | ... | Threshold (0-1) | ... |
|--|--|-----|-----------------|-----|
| <input checked="" type="checkbox"/> Person name | <input checked="" type="radio"/> Block <input type="radio"/> Inform <input type="radio"/> Mask | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Address | <input checked="" type="radio"/> Block <input type="radio"/> Inform <input type="radio"/> Mask | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Age | <input checked="" type="radio"/> Block <input type="radio"/> Inform <input type="radio"/> Mask | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Date or time | <input checked="" type="radio"/> Block <input type="radio"/> Inform <input type="radio"/> Mask | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Social security number or taxpayer ID (US) | <input checked="" type="radio"/> Block <input type="radio"/> Inform <input type="radio"/> Mask | | .5 | ▼ ▲ |
| <input checked="" type="checkbox"/> Email | <input checked="" type="radio"/> Block <input type="radio"/> Inform <input type="radio"/> Mask | | .5 | ▼ ▲ |



Monitor Everything

- **Capturing all interactions** between user, agent flows, tools, data, and LLMs is necessary for development and production
- **Sessions, traces, spans, logs, errors, and token count data** generated during tests are available directly in the developer experience.
- Inspect **traces**, **drill down on spans**, and **spot errors** during conversations without parsing through logs
- Access a series of **metrics** giving you a pulse on the operational performance of your agent flow
- Enable the inspection of production sessions, traces, and metrics

Auto Repair Agent

This Agent is a customer service agent for auto repair that interprets consumer reported issues, checks warranty and recall data, and offers repair recommendations with scheduling options.

Flow

Details

Sessions

Metrics

Permissions

Q Filter

Session status

All

From

All

To

All

| Session ID | Status | URI origin | Start time | Duration | Tokens |
|--------------------------|-----------|-------------------------|-----------------------------------|----------|--------|
| abc-123-def-456-ghi-7890 | Succeeded | https://ipsemlorem/tdfd | Fri, Sep 27, 2024 at 08:48:15 UTC | 18 sec | 4 |
| abc-123-def-456-ghi-7892 | Succeeded | https://ipsemlorem/tdfd | Fri, Sep 27, 2024 at 08:48:15 UTC | 11 sec | 5 |
| abc-123-def-456-ghi-7893 | Succeeded | Test | Fri, Sep 27, 2024 at 08:48:15 UTC | 14 sec | 2 |
| abc-123-def-456-ghi-7894 | Failed | Test | Fri, Sep 27, 2024 at 08:48:15 UTC | 3.2 sec | 7 |

Auto Repair Agent

This Agent is a customer service agent for auto repair that interprets consumer reported issues, checks warranty and recall data, and offers repair recommendations with scheduling options.

Flow

Details

Sessions

Metrics

Permissions

Chat

Session details - Session: 23234e43

Q Search

Agent flow task

Customer agent

User input

GetCustomerProfile

Vehicle information

Warranties and factory service

Customer agent

Duration

4.30s

0.50s

0.50s

1.80s

2.30s

0.50s

Tokens

Info

Details

Errors (0)

Parent Session ID

Trace ID

Start time

End time

Execution duration

Execution tokens

Agent URI

Resource URI

Source system

23234e43

34345454

Wed, May 22, 2025, 12:18:06 UTC

Wed, May 22, 2025, 12:18:10 UTC

4.2s

2

rohit.saha@oracle.com

Retrieve weather

Chat window

Welcome Jun, What can I help you with today?

My engine light is on . Is my car under warranty?

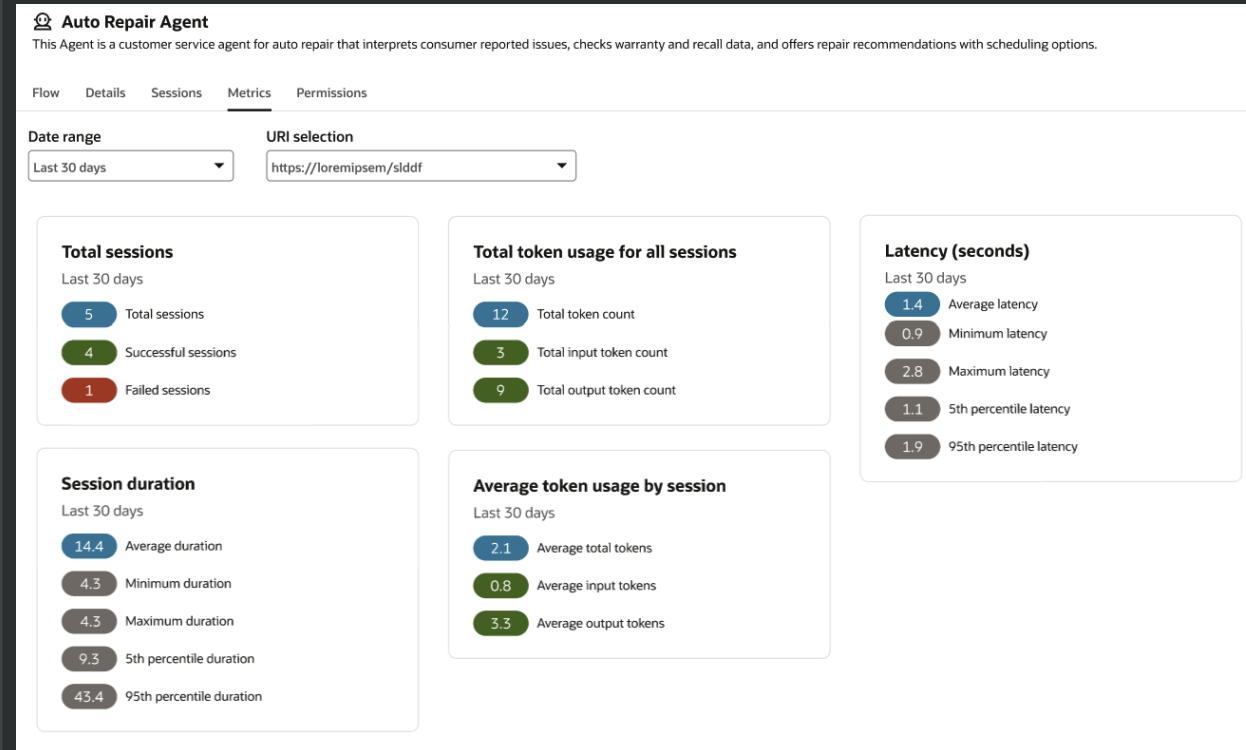
Hi Jun, your 2022 blue Honda Passport is fully covered under warranty. Would you like to schedule a repair?

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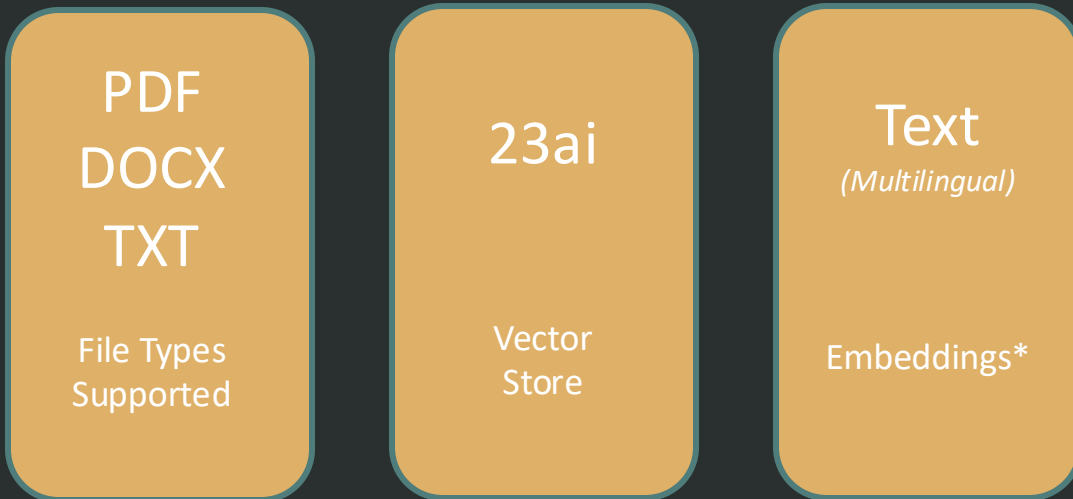
Monitor Everything

- View operational metrics of your agent flow, including:
 - Session count
 - Session duration
 - Token consumption
 - Latency of each thread
- Select relevant time periods and inspect time series trends

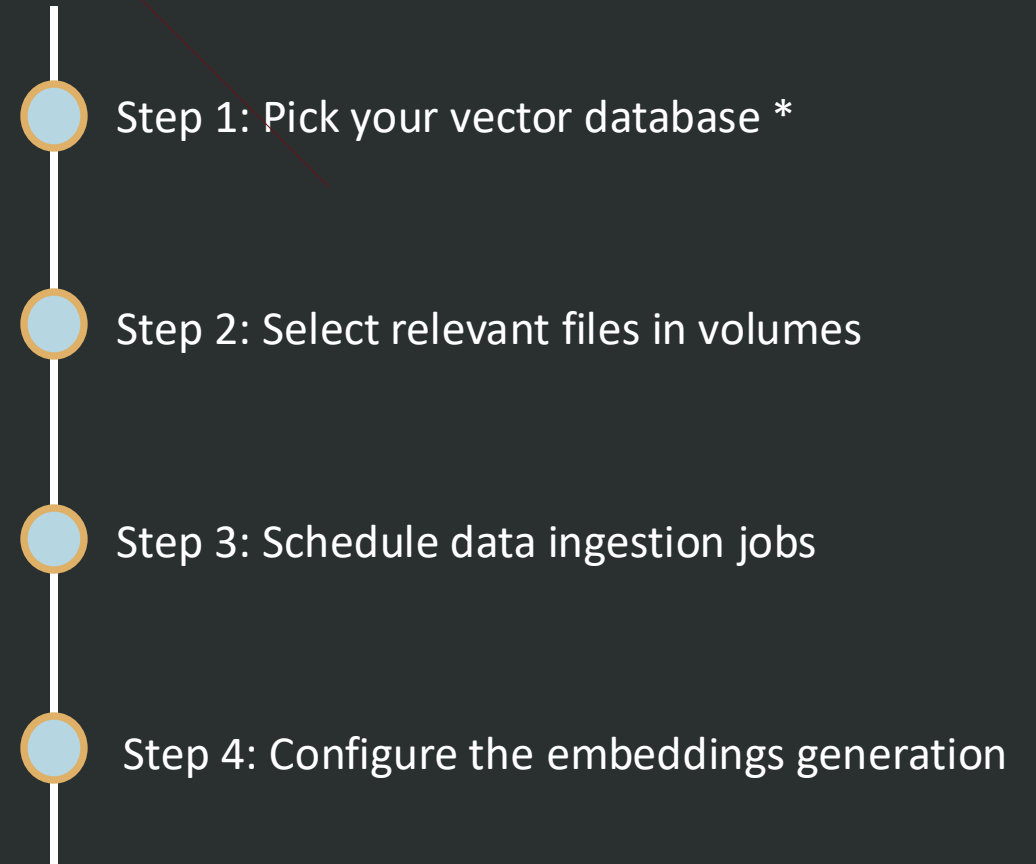


Create Knowledge Bases in AI Data Platform

- Knowledge bases store vectorized representations of documents (pdfs, docx, html) stored in AI Data Platform volumes
- Agent flows can access knowledge bases to search and retrieve semantically relevant documents.



* all-MiniLM-L12-v2 and multilingual-e5-small are initially offered as embeddings models.



* : or use the same ADW 23ai instance created during AIDP provisioning



AI Data Platform Accelerates Agents Development



Unified data management, agent flow development, and deployment platform



Fast, no-code development experience or BYO code



Reduce time to value: tool templates to query your data



Agent protection through thoughtful default guardrails and unified RBAC



Leave no stone unturned and monitor everything

Demo

AI Data Platform

Search

+ Create

Home

Master Catalog

ACME_Drinks

Workflow

Compute

Agent Flows

Management

Workspaces

Data Sharing

Auto Populate Catalogs

Alerts

Roles

Activity

OCW_Demo_Notebook

APAC_Cluster

Year_End_Notebook

Notebook3

EMEA_Cluster

Filter

Default Cluster (running)

Master Catalog

Default

ACME

Default_Schema

Tables

Volumes

Knowledge_Bases

Plastics_Regulations

Models

Bronze

Silver

Gold

ADW_Pre_Prod

FDI

FDI_Schema

Tables

distribution

product_mix

revenue

supply

Master Catalog > ACME > Schema > Knowledge Bases > Plastics_Regulations

Actions Add

Plastics_Regulations

Knowledge base for Plastics regulations for drinks

Data SourceDetailsPermissionsHistory

Filter

| | Name | Type | Location | Ingest schedule | Added on | Added by | |
|--------------------------|------|--------|---|-----------------|---------------------------------|-----------------------|-----|
| <input type="checkbox"/> | US | Table | ACME/Default_Schema/Tables/US_Regulations | Daily at 6am | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |
| <input type="checkbox"/> | EMEA | Bucket | International_Regulations/container/EMEA | Daily at 6am | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |
| <input type="checkbox"/> | APAC | Bucket | International_Regulations/container/APAC | Daily at 6am | Wed, May 22, 2023, 12:18:06 UTC | rohit.saha@oracle.com | ... |



AI Data Platform Workbench | Roadmap Timeline



Q3 2025 - General Availability

Data and ML Developers

- Developer workspaces
- Notebooks & job orchestration
- Apache Spark – Python, SparkSQL
- Notebook Code Assist
- Orchestrate & monitor data pipelines
- Open-source libraries & frameworks
- Compute – Intel, AMD, GPU
- Delta Share

AI Developers

- OCI Gen AI models – Llama, Cohere, OpenAI

Catalog and Governance

- Catalog for data and models
- Object store (Standard Catalog)
- ADB, Exadata, Oracle DB (External Catalog)
- RBAC at table or column level

Integrations

- ADB as a source and target
- OAC – Connect to AIDP Catalog
- FDI – share data/metadata
- Fusion – built-in connector

Q4 2025

AI Developers

- OCI Gen AI models – Llama, Cohere, OpenAI
- Tool Types – RAG, SQL, Vector, LLM
- Low-code agent flow creation
- Agent endpoint deployment
- Agent-flow testing playground
- Observability
- Guardrails

Catalog and Governance

- AI knowledge support

Integrations

- GoldenGate – AIDP lakehouse as Target

2026

Data and ML Developers

- Iceberg support
- Scala
- MLOps
- GIT/CICD

AI Developers

- Multi-Agent support
- MCP server for tools
- Fusion AI Agent Studio integration
- Custom Tools

Catalog and Governance

- Lineage
- Data Quality

Integrations

- 3P data stores, such as Azure Blob

Q&A

Thank you



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colin.j.schmidt@oracle.com

Unlocking the Future: See How AI Is Transforming Analytic Applications

Srikant Gokulnatha et al.

Wed Oct 15, 2:15-3:00PM, Ballroom F, level 2

Data Engineering for AI Using Oracle AI Data Platform

Sujoy Chowdhury
Martin Jung

Marco Polo 805, Level 1

Learn How Partners Accelerate AI Innovation with Oracle AI Data Platform

Santosh
Balasubramanian et al.

Titian 2205, Level 2

From Data to Predictions: Building AI Models with Oracle AI Data Platform

Sujoy Chowdhury

Marco Polo 804, Level 1

AI Predictions with Medallion Architecture and LLMs on Oracle AI Data Platform (Lab)

Sujoy Chowdhury et al.

Expo 306, Level 1

Building Agents with Oracle AI Data Platform: Best Practices

Guy Michaeli
Katrin Kirchhoff
Timothy Nexon

Marco Polo 803, Level 1

Wed Oct 15
3:30-4:15pm

Wed Oct 15
4:45-5:30pm

Thu Oct 16
9:00-9:45am

Thu Oct 16
11:00-12:30pm

Thu Oct 16
11:30-12:15pm

Your feedback is important.

**Scan this QR Code or use the
Mobile App to share your
thoughts on this session.**



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