



ORACLE ANALYTICS & AI

Oracle Private Agent Factory in Oracle Analytics Server

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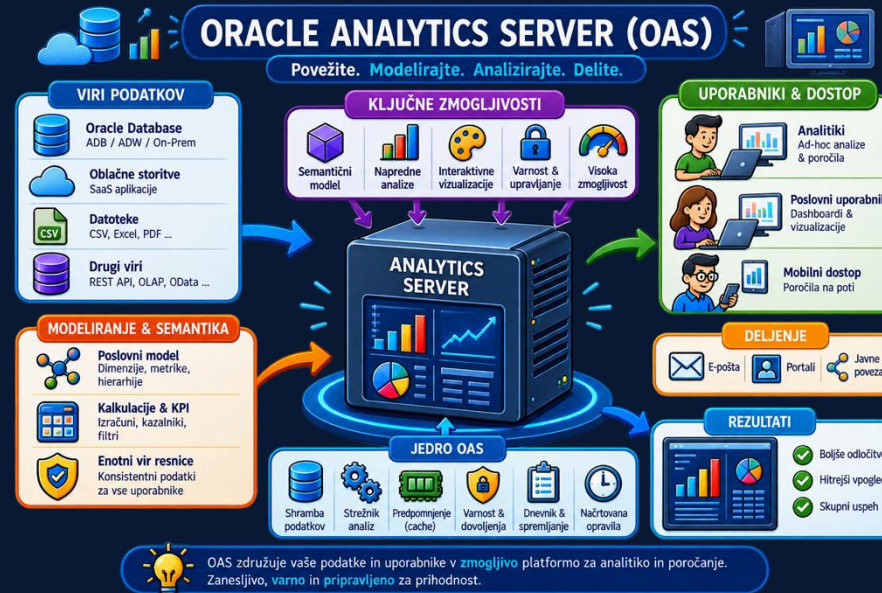


zigavaupot.blogspot.com



Agenda

-  Oracle Analytics Server (OAS)
-  MCP in OAS
-  Oracle Private Agent Factory



01.

Oracle Analytics Server (OAS)

Oracle Analytics Server je „on-premise“ različica Oracle Analytics Cloud, ki sicer deluje v Oraclovem oblaku. V predavanju si bomo pogledali kaj je novega v letošnji različici. V kratki demonstraciji si bomo ogledali primeru MCP strežnika, ki ga najdemo v OAC, v OAS pa te funkcionalnosti ni in smo si ga morali kreirati sami.





Mojca Gros

Višja svetovalka

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- Oracle Analytics Cloud 2025 Professional

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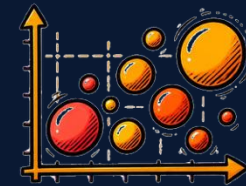
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Kje najdemo Oracle Analytics?

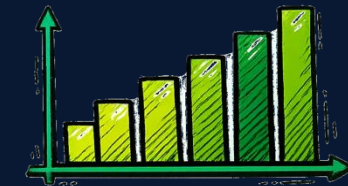


- ARSO
- Banka Slovenije
- ETI
- GURS
- Ministrstvo za finance
- Ministrstvo za notranje zadeve
- Ministrstvo za obrambo
- Ministrstvo za šolstvo
- Ministrstvo za zdravje
- NEK
- Plinovodi
- RTV Slovenija
- Unior



Zakaj BI in DWH nista le IT projekt?

Od razdrobljenih podatkov do zaupanja vrednih informacij in hitrejših odločitev



01 BI ORODJE

Informacije za odločitve

- Enotni KPI-ji in interaktivni pregledi
- Manj ročnega Excela in hitrejša analiza
- Odločitve na podlagi aktualnih podatkov

VIDNOST IN HITROST

02 PODATKOVNO SKLADIŠČE

Zanesljiv podatkovni temelj

- Združi podatke iz različnih sistemov
- Podatke očisti, uskladi in zgodovinsko hrani
- Zagotovi »eno verzijo resnice«

KAKOVOST IN ZAUPANJE

03 IZVEDBA PROJEKTA

Kakovost zahteva čas

- Popis virov, KPI-jev in poslovnih pravil
- Ureditev kakovosti, varnosti in dostopov
- Fazni razvoj, testiranje in uvajanje uporabnikov

POSTOPEN, NADZOROVAN RAZVOJ

04 POSLOVNA VREDNOST

Trajen poslovni učinek

- Manj napak in ponavljajočega dela
- Hitrejša poročanja ter boljši nadzor
- Skalabilna osnova za rast in nove analize

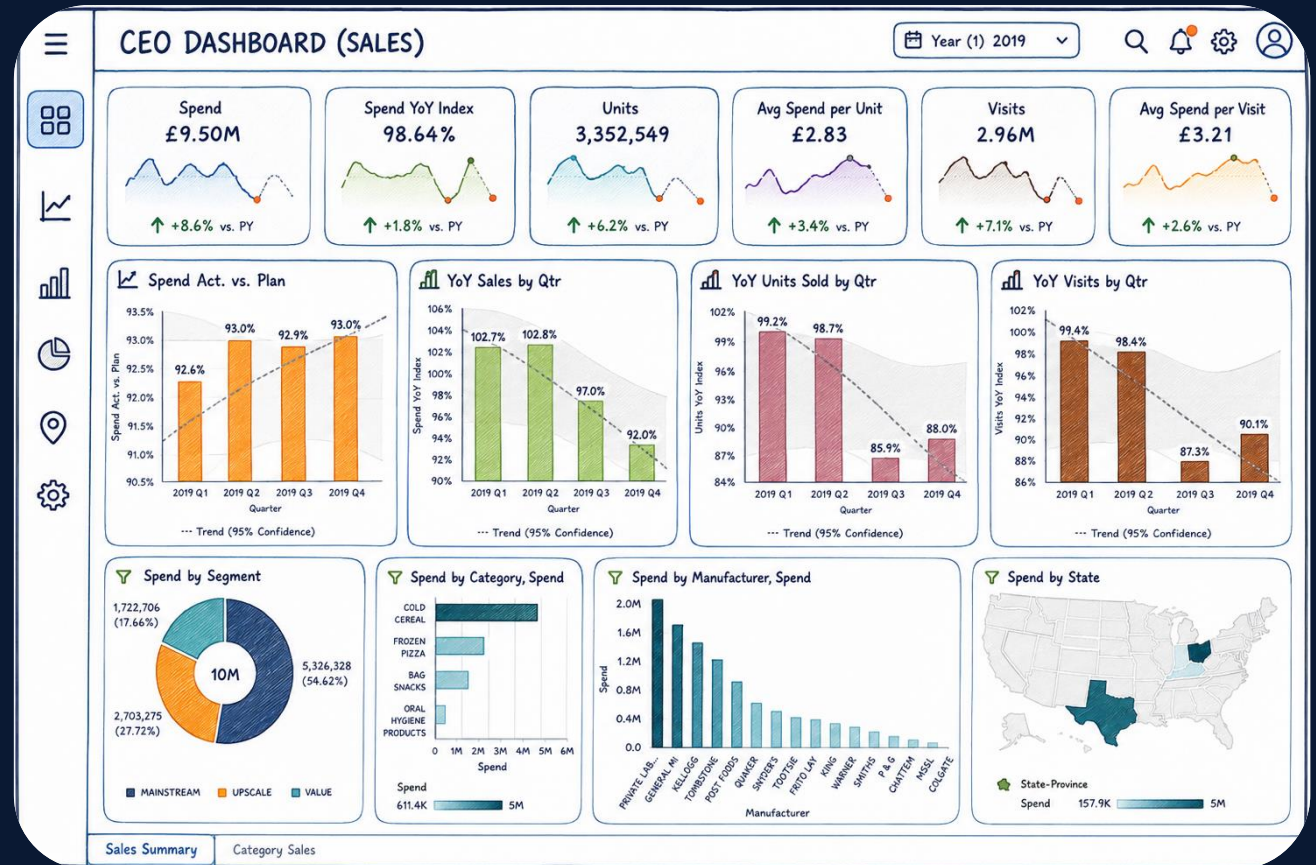
UČINEK, KI SE NADGRAJUJE

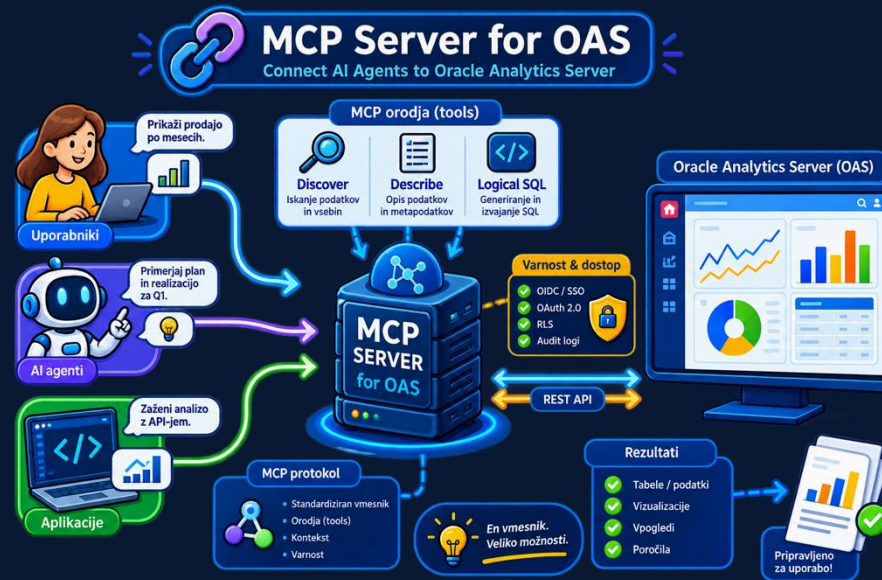
Ključna misel: BI je viden del rešitve, DWH pa temelj, ki zagotovi hitre, primerljive in zaupanja vredne informacije.



Oracle Analytics Server 2026

Demo





02.

MCP in OAS

Kako Model Context Protocol omogoča AI agentom (Claude, Codex in drugim), da varno odkrivajo in poizvedujejo po podatkih, ki jih zagotavlja Oracle Analytics Server?



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Kaj je MCP?

Model Context Protocol

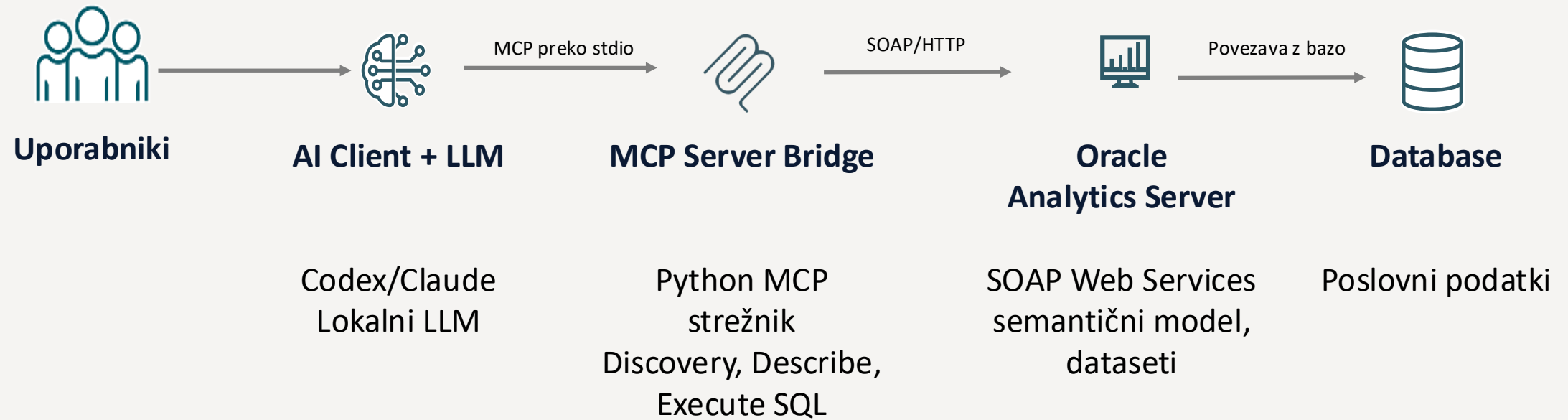
- Odprt standard za povezovanje AI agentov in LLM-jev z zunanjimi orodji, podatki in storitvami
- Nadomesti ločene, po meri narejene integracije z enotnim, ponovljivim načinom komunikacije
- MCP strežnik izpostavi orodja in podatke (npr. poizvedbe, dokumente, API-je), odjemalec (Claude, Codex, drug LLM) jih lahko odkrije in uporabi
- Podpira različne prenosne mehanizme: stdio, SSE, HTTP Streamable
- Primer: OAS MCP Bridge omogoča LLM-ju dostop do Oracle Analytics Serverja, kjer je omogočeno odkrivanje podatkov, opis metapodatkov in izvajanje logičnih SQL ukazov.





Arhitektura MCP strežnika za OAS

On-Premises/Cloud



MCP strežnik za OAS

Demo

Količšen je skupni prihodek za vsako kategorijo izdelkov?
Rezultate razvrsti od najvišjega do najnižjega prihodka.

Seveda! Tukaj je skupni prihodek za vsako kategorijo izdelkov, razvrščen od najvišjega do najnižjega prihodka:

Kategorija izdelka	Skupni prihodek
 Chocolate	517,5
 Coffee	426
 Tea	135

✓ Poizvedba je bila uspešna.

Prikaži skupno prodano količino za vsak segment strank in rezultate razvrsti od največje do najmanjše količine.

Tukaj je skupno prodana količina za vsak segment strank, razvrščena od največje do najmanjše količine:

Segment strank	Skupno prodana količina
 Wholesale	55
 Retail	35

✓ Poizvedba je bila uspešna.

+ Vprašaj me karkoli o podatkih ...





03.

Oracle AI Database Private Agent Factory (OPAF)

Pogledali si bomo arhitekturo OPAF, spoznali osnovne komponente platforme, poskusili odgovoriti na vprašanje zakaj sploh OPAF, in vse skupaj sklenili z demonstracijo v živo.



Kaj je Oracle Private Agent Factory (OPAF)?

No-Code

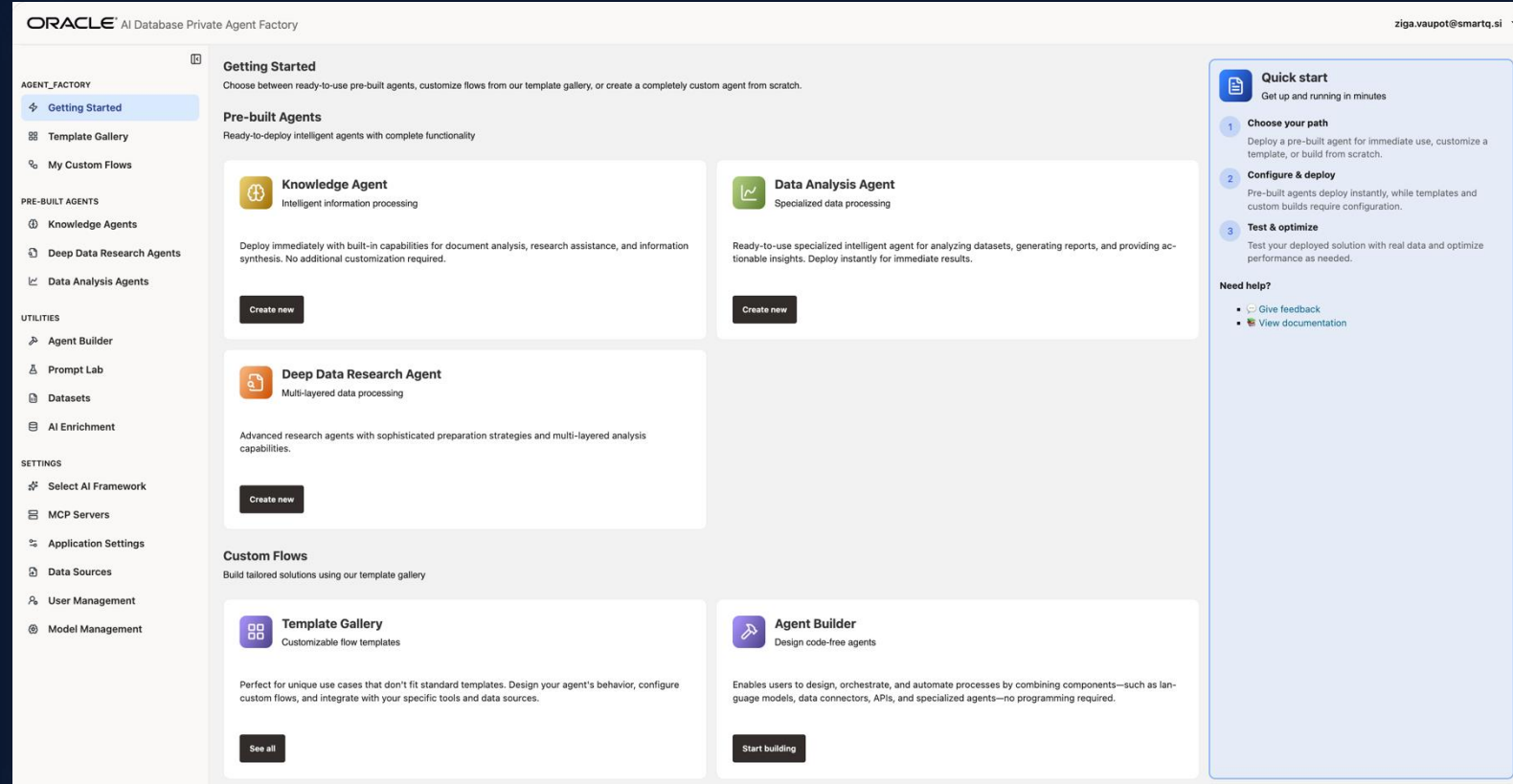
Brezkodna (no-code) platforma za razvoj, testiranje, upravljanje in izvajanje agentov UI

Free

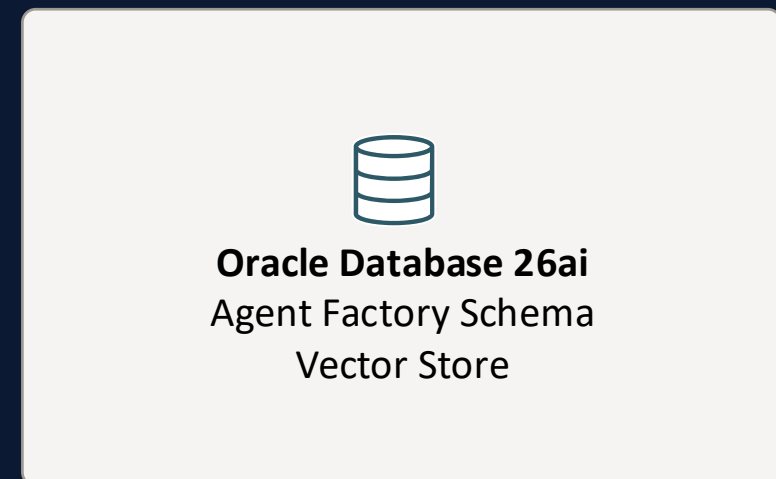
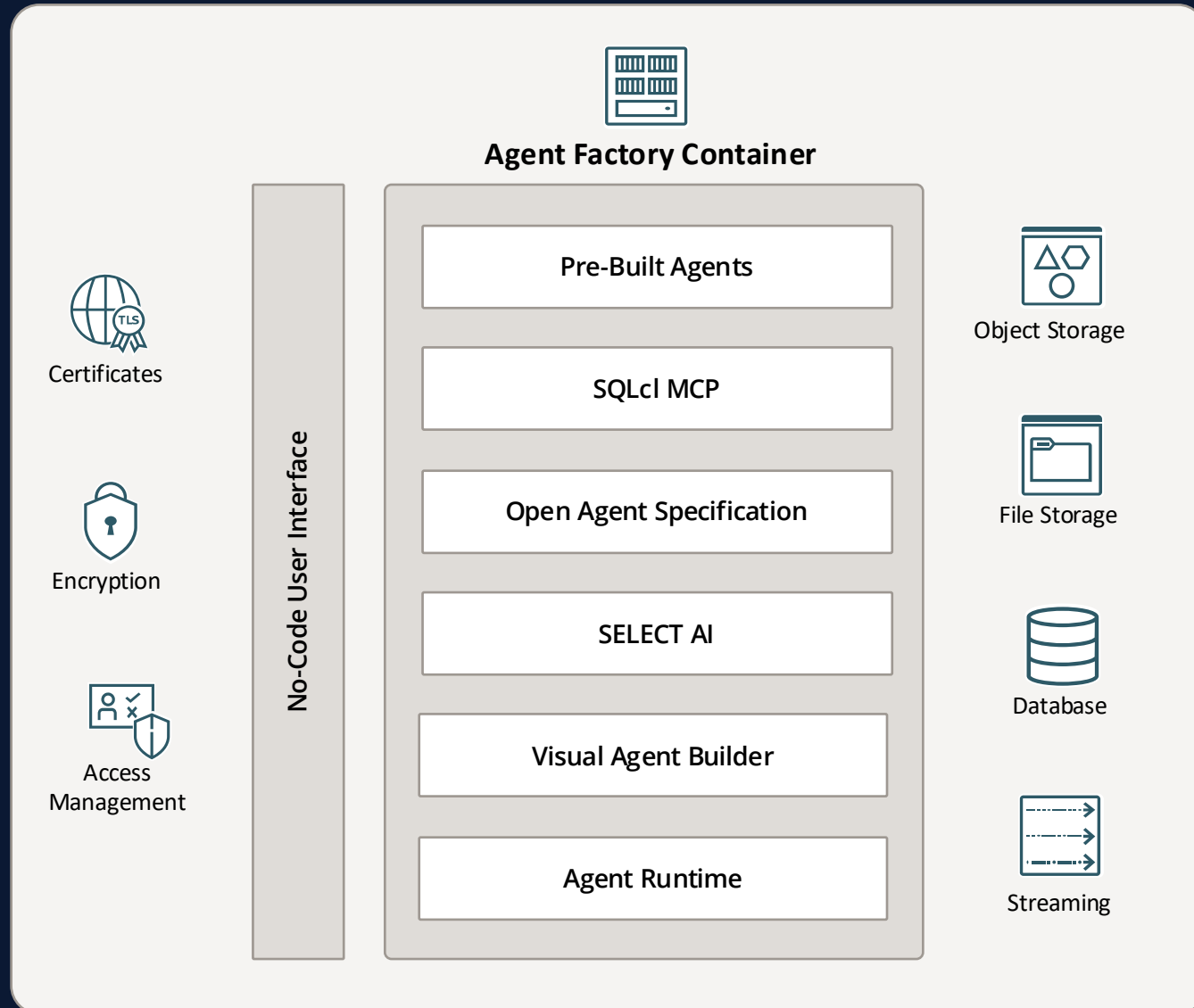
Brezplačna razširitev Oracle baze podatkov, ki je osnova rešitve. Potrebna pa je baza 26ai (na primer: Vector Search).

Open / Air Gapped

Zaradi vsebniške (container) arhitekture je OPAF prenosljiv — poganjamo ga lahko v oblaku (na primer: OCI) ali v celoti lokalno, znotraj lastnega, izoliranega omrežja (air-gapped).



Arhitektura OPAF



Kje dobimo OPAF?



Database > Technologies >

Oracle AI Database Private Agent Factory

Oracle AI Database Private Agent Factory is a no-code platform to build custom AI agents and workflow automations that connect safely to your enterprise data and tools, then deploy in minutes with enterprise-grade security, performance and governance. Build and deploy enterprise ready AI agents and workflow automations using Knowledge based AI agents, Data Analysis Agent, AI workflow automation, Security and governance, No-code Agent Builder and Models and interoperability.

Please review Agent Factory documentation available at [here](#) for more details.

Download	Description	Name
 oracle_agent_factory_X86_26.7.0.tar.gz	Oracle AI Database Private Agent Factory for Linux X86-64. This installer is certified for X86-64 based Linux as well as for Intel based Mac systems. This version of Private Agent Factory was released on August 14, 2026.	Oracle AI Database Private Agent Factory for Linux X86-64
 oracle_agent_factory_arm64_26.7.0.tar.gz	Oracle AI Database Private Agent Factory for ARM 64. This installer is certified for Linux ARM as well as for M series(Apple Silicon) Mac systems. This version of Private Agent Factory was released on August 14, 2026.	Oracle AI Database Private Agent Factory for ARM 64
 oracle_agent_factory_X86_26.4.0.tar.gz	Oracle AI Database Private Agent Factory for Linux X86-64. This installer is certified for X86-64 based Linux as well as for Intel based Mac systems. This version of Private Agent Factory was released on June 3rd, 2026.	Oracle AI Database Private Agent Factory for Linux X86-64
 oracle_agent_factory_arm64_26.4.0.tar.gz	Oracle AI Database Private Agent Factory for ARM 64. This installer is certified for Linux ARM as well as for M series(Apple Silicon) Mac systems. This version of Private Agent Factory was released on June 3rd, 2026.	Oracle AI Database Private Agent Factory for ARM 64

Oracle Software Delivery Cloud (lokalna namestitev)

<https://www.oracle.com/database/technologies/private-agent-factory-downloads.html>

Marketplace Aplikacije Storitve Partnerji Viri Feedback

ORACLE®

AI Database Private Agent Factory

 **Oracle AI Database Private Agent Factory** [Pridobi aplikacijo](#)

OCI Application

No-code platform to build and deploy custom AI agents, or use prebuilt ones for speed and efficiency

Oracle Cloud Infrastructure Artificial Intelligence, Database, Data & Analytics

Free

Pregled Slike in videoposnetki Ponudnik

Ponudnik rešitve: Oracle

Podpora

Podrobnosti verzije

Jeziki

Oznake

Ponudnik rešitve: Oracle

Oracle AI Database Private Agent Factory is a no-code platform that enables users to rapidly deploy intelligent AI agents in a secure environment with an intuitive interface. Leverage pre-built and custom-built agents to empower your solutions with RAG, dynamic knowledge base expansion, and data analysis.

Why use only one AI tool at a time? **Oracle AI Database Private Agent Factory** leverages several state-of-the-art AI techniques in a single, easy-to-use platform, allowing you to get the most of multiple custom data sources. This application is useful for developers, database administrators, and decision makers.

Oracle AI Database Private Agent Factory offers multiple useful features such as:

- Pre-built Agents - Instantly deploy agents for common use-cases.
- Live Testing - Built-in console for response simulation.
- Visual Agent Builder - Drag-and-drop builder.
- Serialization - Agent / Workflow saved as yaml files.
- Component Variety - LLMs, prompts, data-sources, agents, tools.
- Interoperability - Same representation as In-Database Agents.
- Oracle Components - Select AI, SQL queries, Vector Search, OML, Statistical & Analytical functions etc.
- Security - SSO and built-in Role Management.

Oracle Marketplace (1-klik namestitev v OCI)

<https://marketplace.oracle.com/app/agentfactory>





Use Case: Knowledge Agent

Kaj je Knowledge Agent?

- Agent, ki nadgrajuje zmožnosti AI Vector Search in LLM s podatki podjetja ter s tem omogoča natančne, kontekstualno bogate odgovore z iskanjem relevantnih informacij iz baz znanja, dokumentov in spletnih virov.

Ključne zmožnosti

- Kontekstualno pridobivanje podatkov iz nestrukturiranih virov podatkov
- Utemeljeni odgovori, sledljivi do virov, potrjenih s strani podjetja, z vgrajenimi zaščitnimi mehanizmi (guardrails)
- Pripravljeno za integracijo – povezuje se s korporativnimi spletnimi mesti, datotečnimi sistemi itd.

The screenshot displays the Oracle AI Database Private Agent Factory interface. The top bar shows the Oracle logo and the text 'AI Database Private Agent Factory'. The user's email 'ziga.vaupot@smartq.si' is visible in the top right corner. The main interface is titled 'Piki Jakob Agent' and 'Knowledge Agent treniran na zgodbi Moj prijatelj Piki Jakob'. The chat history shows three messages:

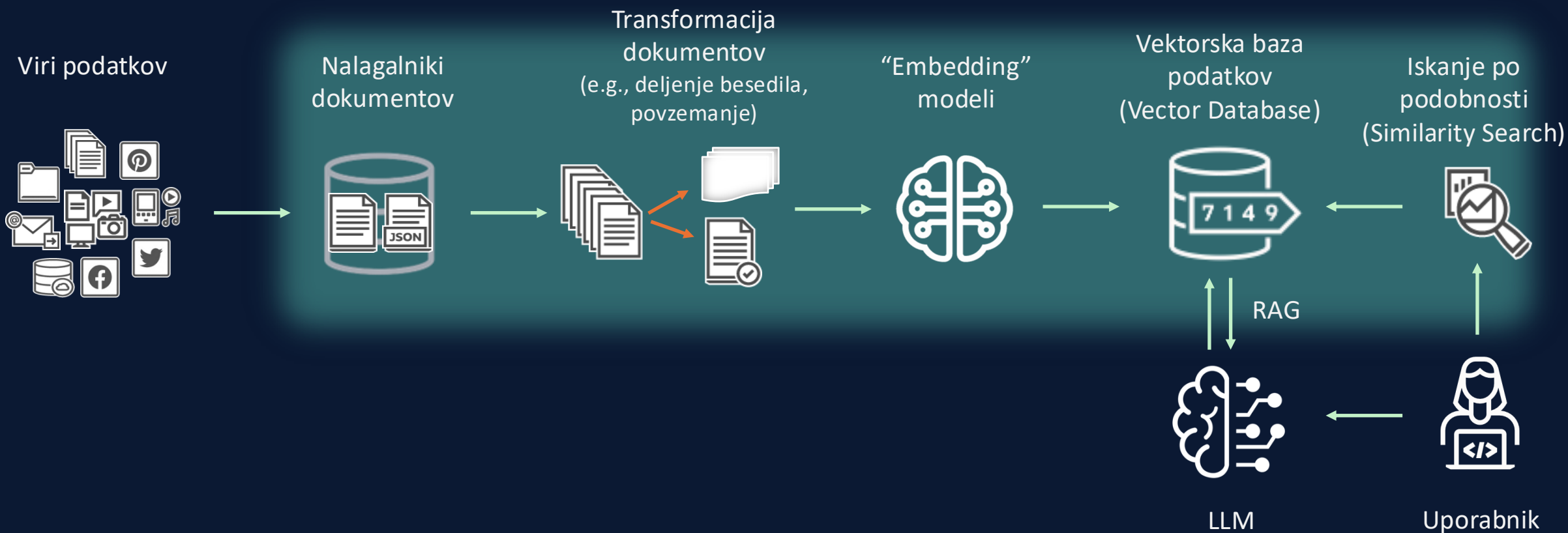
- Message 1:** User: 'ziga.vaupot@smartq.si (You)' at 25. 8. 2026, 15:28:00. Question: 'Kdo je Piki Jakob?'. Agent response: 'Piki Jakob je glavni lik v knjigi *Moj prijatelj Piki Jakob*. Gre za medvedka, ki ne živi v gozdu ali živalskem vrtu, temveč v bloku na polici za igrače. V šoli medvedov obiskuje učitelja – fanta – in se z njim ter ostalimi sošolci (Marko, Filip, Timika, Josip Jupiter, Benjamin in pes Floki) udeležuje pouka. Piki je po naravi tiho pameten in radoveden; ko ga učitelj pokliče, ga naslovi z imenom „Piki Jakob“. Vsi liki v zgodbi nosijo priimek Jakob, kar velja tudi za Pikija. Njegova vloga je centralna in skozi zgodbo se izkazuje kot pogumen ter pogosto tudi leteči medved.' Sources: '1 Vse informacije o knjigah Založbe Mladinska knjiga lahko dobite tudi na internetu: [www. CIP -](#)'
- Message 2:** User: 'ziga.vaupot@smartq.si (You)' at 25. 8. 2026, 15:28:52. Question: 'Kdo je boljši šahist, Piki ali fant?'. Agent response: 'Fant je v zgodbi prikazan kot spretnejši šahist – kljub Pikijevemu pojevanju figur učitelj ostane bolj izkušen in pogostejše zmaga v igri.' Sources: 'Razumeš?« 1 Vse informacije o knjigah Založbe Mladinska knjiga lahko dobite tudi na internetu: [www. CIP -](#) Razumeš?«'
- Message 3:** User: 'ziga.vaupot@smartq.si (You)' at 25. 8. 2026, 15:34:58. Question: 'kakšna je vloga učitelja pri vsem skupaj?'. Agent response: 'Učitelj je glavni vodja razreda in skrbnik učnega procesa. Daje navodila, postavlja pravila in nadzoruje vedenje učencev ter posreduje med njimi v primeru nesoglasij. Poleg tega organizira dodatne dejavnosti – na primer igro šaha – kjer deluje kot nasprotnik in mentor ter spodbuja Pika k izboljšanju njegovega znanja. S svojimi komentarji in odločitvami usmerja potek pouka ter skrbi za red in disciplino v razredu.' Sources: 'Razumeš?« 1 Vse informacije o knjigah Založbe Mladinska knjiga lahko dobite tudi na internetu: [www. CIP -](#) Razumeš?« Ko se učitelj zjutraj zbudi, po- gleda, ali jaz že spim, in mi vrže medveda na glavo. Piki prileti »Tukaj smo v šoli. Mačke mijavkajo in nič drugega.« »Naš maček tudi žvižga.« je ugovarjal Piki.'

The bottom of the interface shows a text input field with the placeholder 'How can I help you?' and a send button.





Use case: Knowledge Agent (Pre-Built)





Use case: Data Analysis Agent (Pre-Built)

Kaj je Data Analysis Agent?

Agent, zasnovan za interakcijo s podatkovnimi bazami, razumevanje strukture shem in samodejno pridobivanje različnih semantičnih vpogledov (semantic insights) z uporabo zmožnosti LLM.

Ključne zmožnosti

- Generiranje semantično relevantnih vprašanj z analizo variacij (Variation Analysis)
- Razlage, podprte z LLM
- Samodejno generiranje vizualizacij
- Pripravljeno za integracijo – povezuje se z bazo podatkov (19c in novejša*)

The screenshot displays the Oracle AI Database Private Agent Factory interface. The top bar shows the Oracle logo and the text "AI Database Private Agent Factory". The user's email, "ziga.vaupot@smartq.si", is in the top right corner.

The main interface is titled "Sales Analysis Agent" with the subtitle "A data analysis agent trained on SALES data". Below the title are tabs for "Messages", "Data", "SQL executor", and "Help".

The "Messages" tab is active, showing a conversation with the "Sales Analysis Agent". The user's message is: "analyze customer segments sales and discounts by region". The agent's response includes a table titled "Regional view of sales and discounts by customer segment".

Region	Segment with the largest total revenue	Revenue (USD)	Segment with the highest average discount	Avg Discount %	Revenue per unit (USD) - top-earning segment
AMERICAS	Active Singles	\$527,358	Baby Boomers	25.48 %	Students - \$99.05 per unit
APAC	Active Singles	\$398,893	Seniors	29.88 %	Seniors - \$104.13 per unit
EMEA	Active Singles	\$521,610	Urban based	28.89 %	Others - \$107.31 per unit

Below the table, the agent provides "Key take-aways":

- Active Singles consistently generate the highest revenue in every region, making them the primary growth engine.
- The most generous discounts differ by region: Baby Boomers in the Americas, Seniors in APAC, and the Urban-based segment in EMEA.
- Segments receiving the highest discounts are not always the lowest revenue generators; in APAC, seniors enjoy the largest discount and the highest revenue per unit, suggesting discounts can boost unit profitability when targeted correctly.

The agent also suggests: "Focusing discount programmes on high-potential segments (e.g., seniors in APAC, urban customers in EMEA) while maintaining strong offers for the already-strong Active Singles group could improve both volume and margin across regions."

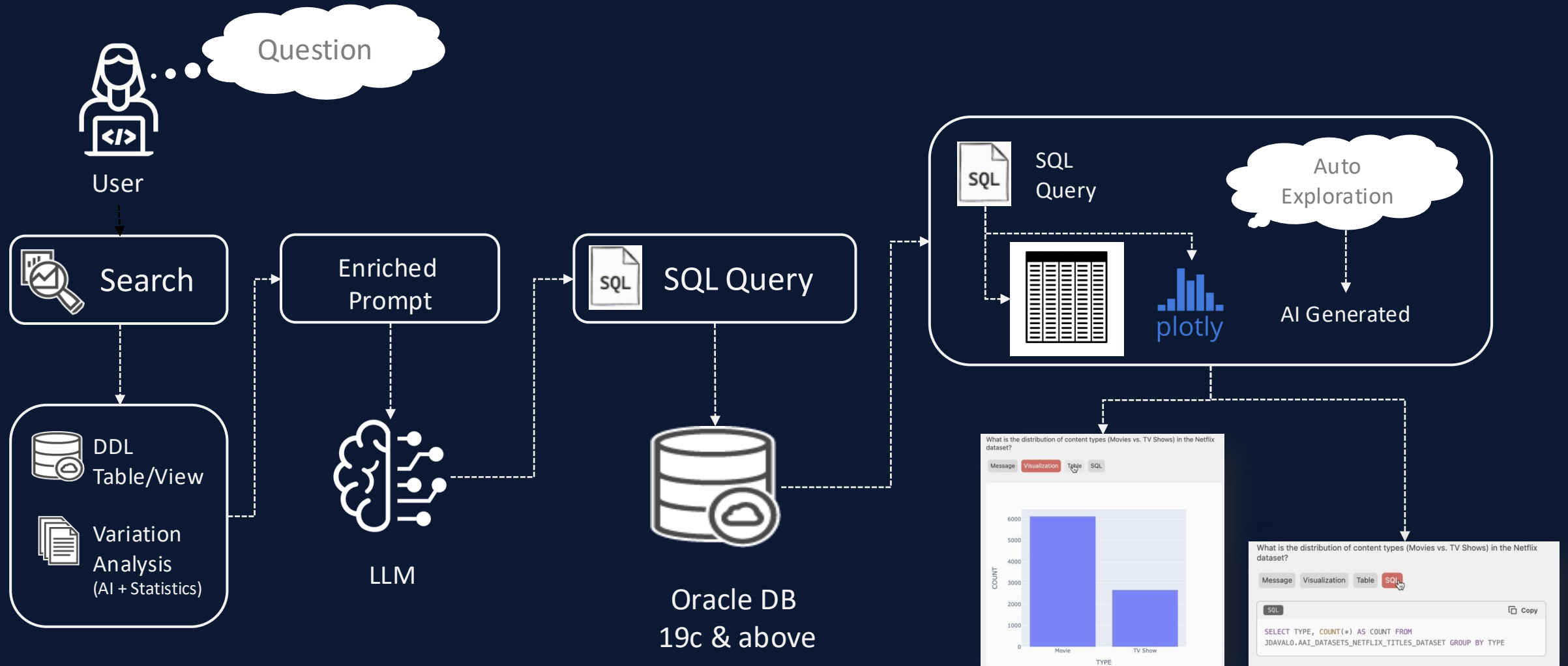
The user's next message is: "can you prove that female buyers revenue is in average higher than male?". The agent's response is: "Yes. The average revenue per female buyer is \$982.66, while the average for male buyers is \$969.57 - a difference of \$13.09 in favor of females. This suggests that, on average, female customers generate slightly higher sales per order, indicating a modest but consistent revenue advantage that could be worth exploring in targeted marketing or loyalty programs."

At the bottom, there is a text input field with the placeholder "How can I help you?" and a send button.





Use case: Data Analysis Agent (Pre-Built)



Results





Use Case: Agent Builder

Kreiranje, testiranje in uvajanje prilagojenih agentov / delovnih tokov za različne primere uporabe.

Komponente

- LLM: vLLM, ollama, oci genai, private ai services container, openai
- Agent: LLM + Orodja + Conversational Memory
- Orodja: MCP Server (SSE in HTTP Streamable), REST API-ji združljivi z Open API kot Orodja
- Vhodi: Chat Input, Text Input, Prompt Node
- Izhodi: Chat Output, Email
- Podatki: File Upload , Read CSV, SQL Query

Razširljivo

- Možnost ustvarjanja novih vozlišč (nodes) v Agent Builderju

The screenshot displays the Oracle AI Database Private Agent Factory interface. The top bar shows the Oracle logo and the text 'AI Database Private Agent Factory'. The user's email 'ziga.vaupot@smartq.si' is visible in the top right corner. The interface is divided into a left sidebar and a main content area.

Left Sidebar:

- AGENT_FACTORY**: Contains icons for 'Messages' and 'Chat history'.
- PRE-BUILT AGENTS**: Contains icons for various pre-built agents.
- UTILITIES**: Contains icons for various utility functions.
- SETTINGS**: Contains icons for various settings.

Main Content Area:

The main content area displays a custom flow for 'ACSI AI Pilot v2'. The flow is titled 'New custom flow created.' and includes a 'run' button. The flow is currently in the 'Messages' tab.

Heading 3: Plant Cells and Animal Cells

Plant and animal cells share many structures. Both have a nucleus, DNA, a cell membrane, cytoplasm, mitochondria, ribosomes, and vacuoles. But they are not identical.

Plant cells have a cell wall, chloroplasts, and usually one large central vacuole. These structures help plants stay firm and make food. Animal cells do not have a cell wall or chloroplasts, and they usually have smaller vacuoles.

Plant cells often appear more box-shaped because of the rigid cell wall. Animal cells often appear more rounded or irregular because they do not have that rigid outer layer.

Plant and Animal Cell Comparison Chart

Structure	Plant Cell	Animal Cell
nucleus	yes	yes
DNA	yes	yes
cell membrane	yes	yes
cytoplasm	yes	yes
mitochondria	yes	yes
ribosomes	yes	yes
vacuoles	yes; usually one large central vacuole	yes; usually smaller vacuoles
cell wall	yes	no
chloroplasts	yes	no

Labeled Animal Cell Diagram

animal cell

- cell membrane: outer boundary that controls what enters and leaves
- cytoplasm: material filling the inside of the cell
- nucleus: contains most of the DNA
- mitochondria: release usable energy
- ribosomes: build proteins
- vacuoles: store water, nutrients, or wastes

Labeled Plant Cell Diagram

plant cell

- cell wall: rigid outer support layer

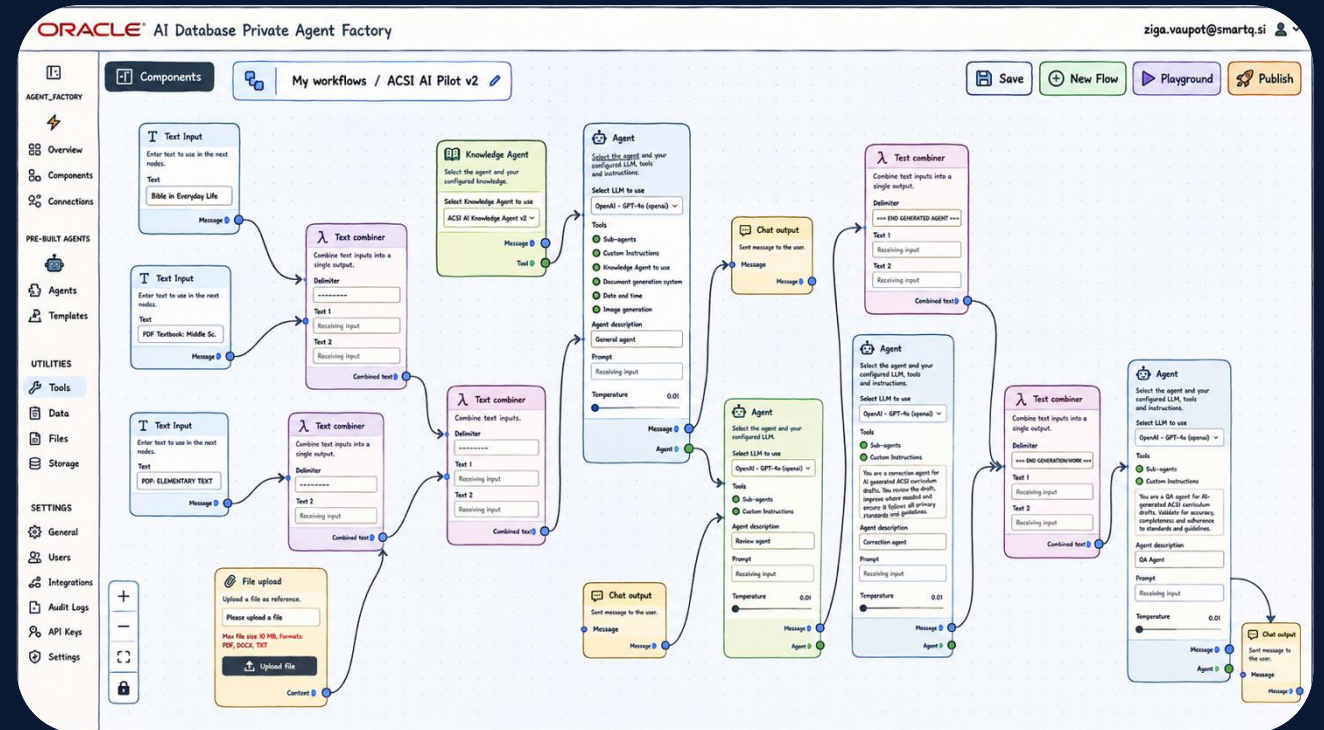
How can I help you?

large central vacuole: stores water and other materials



Private Agent Factory

Demo



RAZPRAVA

