

The Transformative Potential of Generative AI in Education

Higher Education User Group Conference (HEUG)

Brisbane

October 31, 2023

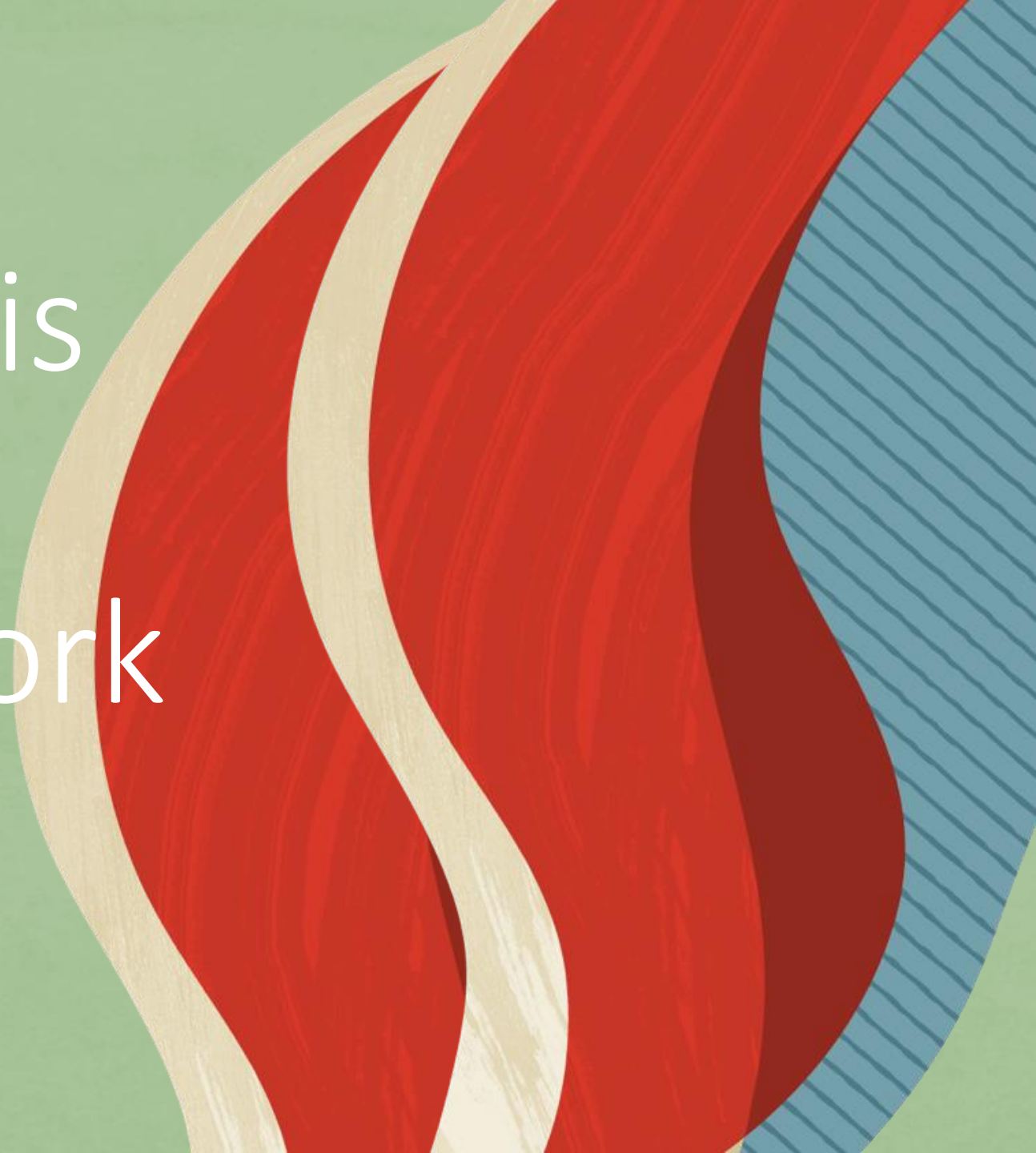
Presented By:

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Generative AI is
transforming
the way we work
today





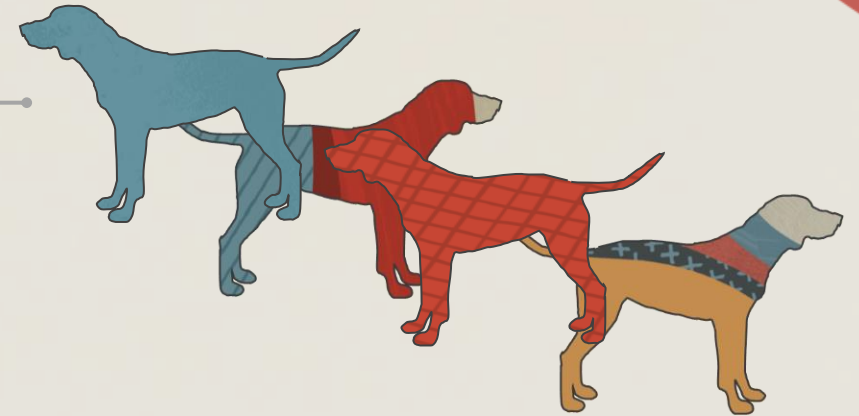
What exactly *is*
generative AI?



Difference between ML and generative AI

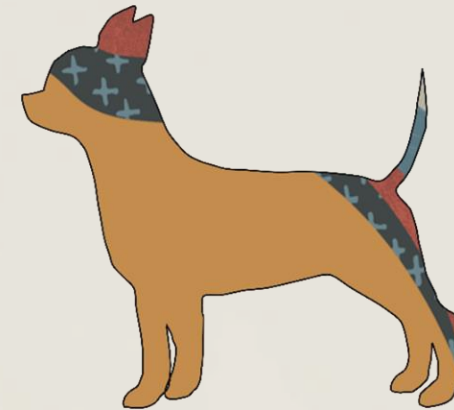
Classical machine learning

Teach machines to recognize patterns in data to make predictions, classifications, or explanations.



Generative AI

Go a step further with models able to recognize patterns to create something new that adheres to those patterns and has a basis in our reality.



“Hello, how are”

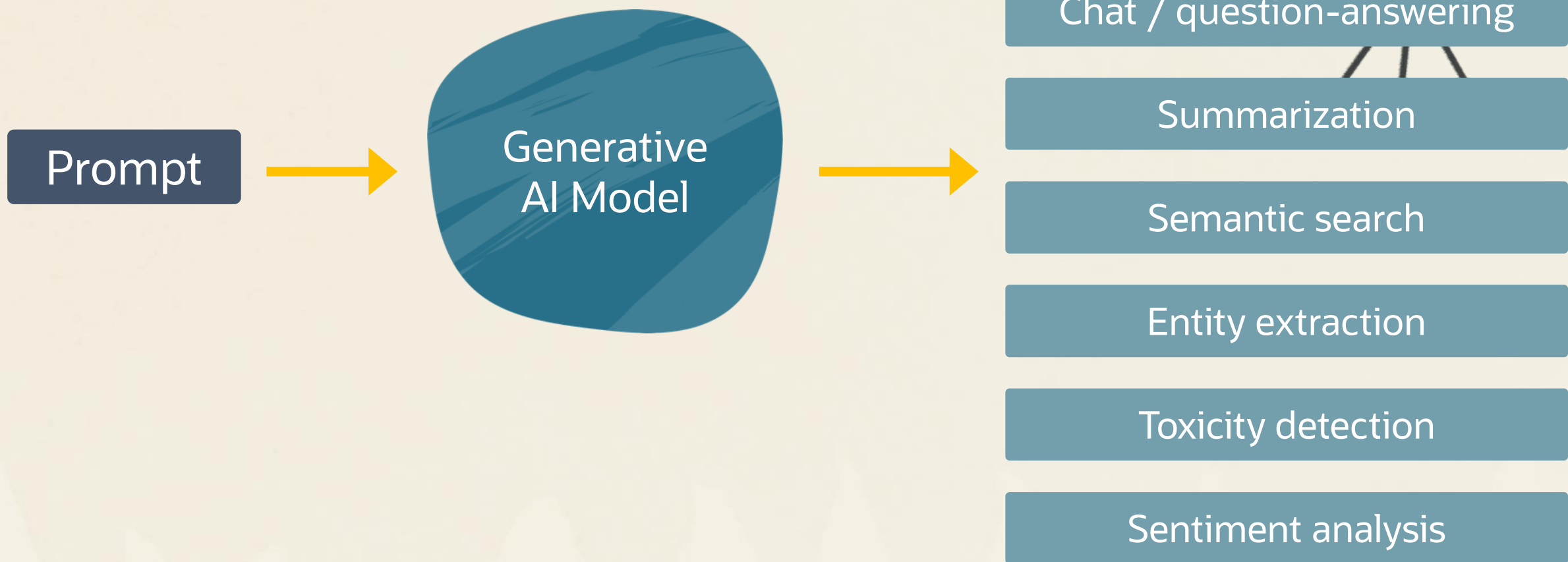


Generative
AI Model



“you?”





Chat GPT and Generative AI:

25 applications -

- in teaching and assessment
- to support administrative tasks
- to support student engagement
- to support research



ChatGPT & Generative AI



- Mark student essays
- Develop a rubric
- Develop a curriculum
- Offer personalized feedback
- Generate quiz/test questions
- Explain visual aids
- Assist with lesson planning
- Create exemplars for assessment tasks



- Writing emails to students
- Write a letter of recommendation
- Assist with job interview preparation
- Provide feedback on a resume or cover letter
- Develop diverse teams
- Provide feedback on student assignments



- Summarise long articles & text
- Generate study materials
- Provide historical context
- Develop interactive presentations & alternatives
- Provide homework support to students
- Analyse student report writing based on a rubric



- Research writing assistance
- Research questions for research
- Research trend analysis
- Assistance with grant writing
- Generate project ideas
- Provide support for PhD students
- Assistance with qualitative data analysis

Times Higher Education, 15/10/23, [ChatGPT and generative AI: 25 applications in teaching and assessment](#), Seb Dianati & Suman Laudari
Times Higher Education, 15/10/23, [ChatGPT and generative AI: 25 applications to support administrative tasks](#), Seb Dianati & Suman Laudari
Times Higher Education, 15/10/23, [ChatGPT and generative AI: 25 applications to support student engagement](#), Seb Dianati & Suman Laudari
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Augment and automate repetitive, manual tasks with Content Generation

Generate social media copy advertising the services of a university bookshop

Generate

📖 Discover the Ultimate Bookworm's Paradise at Our University Bookshop! 📖

Are you a proud student or alumni of [University Name]?

🎓 Looking for a one-stop shop for all your academic and leisure reading needs? Look no further!

☀️ What We Offer:

📖 Vast Selection: From textbooks to bestsellers, we've got you covered!

🛒 Competitive Prices: Save big on course materials and more.

📦 Exclusive Deals: Special discounts for [University Name] students and staff.

🌟 Custom Merchandise: Show your school spirit with [University Name] gear.

🌐 Online Shopping: Can't make it to the store? No problem - shop with us online!

😊 Why Choose Us:

👤 Run by Scholars: Our staff knows exactly what you need for success.

🕒 Convenient Hours: Open late for your study sessions!

📖 Textbook Buyback: Recycle your old books for cash.

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🚩 Join the [University Name] Bookshop family today and experience the difference! 🚩

Visit us in person at [Bookshop Location] or shop online at [Website URL]. Get ready to fall in love with reading all over again! 🛒 #UniversityBookshop #KnowledgeIsPower #ReadOn

[Image: A photo of our welcoming bookstore entrance]

[Disclaimer: Offers and services may vary. Visit our website for the most up-to-date information.]

Extract key concepts from complex inputs with Summarization

Summarize the Australian Government's Job Ready Graduate Scheme

Generate

As of my last knowledge update in January 2022, the "Job-Ready Graduates Package" was a higher education reform package introduced by the Australian Government. It aimed to change the way university education is funded and to encourage students to pursue degrees in fields with high job demand. Here's a summary of the key components of the scheme:

1. Funding Model Changes: The package included a new funding model for universities, which aimed to shift the focus towards courses that were more job-oriented and in high demand. This meant reducing funding for some courses while increasing it for others.
2. Fee Changes: Some students were expected to pay higher fees for their degrees, particularly those pursuing degrees in humanities and social sciences. On the other hand, students studying in areas with perceived job shortages, such as engineering and nursing, would pay lower fees.
3. Additional University Places: The package also allocated more university places, with a particular focus on courses related to healthcare, teaching, and STEM (Science, Technology, Engineering, and Mathematics) fields.
4. Financial Support for Regional Universities: It provided extra funding for regional universities, encouraging them to offer courses that met the specific needs of their communities.

Please note that policies and government schemes can change over time, and I don't have information beyond January 2022. I recommend checking with the latest government sources or official websites for any updates or modifications to the Job-Ready Graduates Package that may have occurred since then.

Improve quality of human outputs with Copyediting

Rewrite this networking email to be more professional in style:

Hey Donna! It was so cool to meet you last week!! I liked talking to you about generative AI - I had no clue what that was lol Here's my email so you can write me back! Talk to ya soon, Elena

Generate

Dear Donna:

It was a pleasure to meet you last week. I found our conversation on generative AI to be both informative and engaging. I had no prior knowledge of this field, but you have piqued my interest.

Please feel free to contact me via email. I look forward to hearing from you.

Best regards,
Elena

Innovating with Generative AI means ...

...being able to perform tasks such as

Write job descriptions, job profiles. Review for poor/aggressive/ biased language

Create marketing messages for campaigns in your brand voice

Create pre-appointment summaries of student history & interactions

Give candidates a summary of their best-fit capabilities and attributes for a position

Craft personalized recommendations based on student preferences

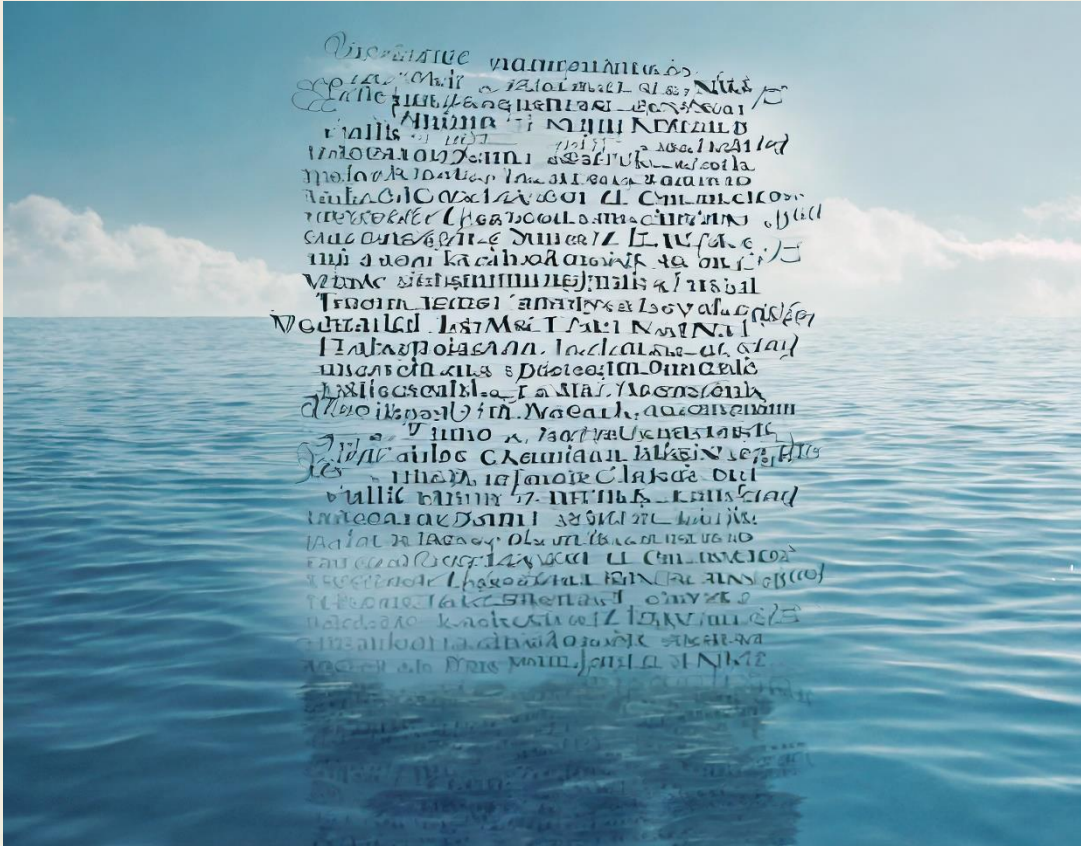
Summarise student sentiment from support interactions

Give employees suggestions for goal descriptions to foster greater alignment.

Analyse and predict academic success, grades, at risk students, potential dropouts

Draft knowledge articles based on case interactions

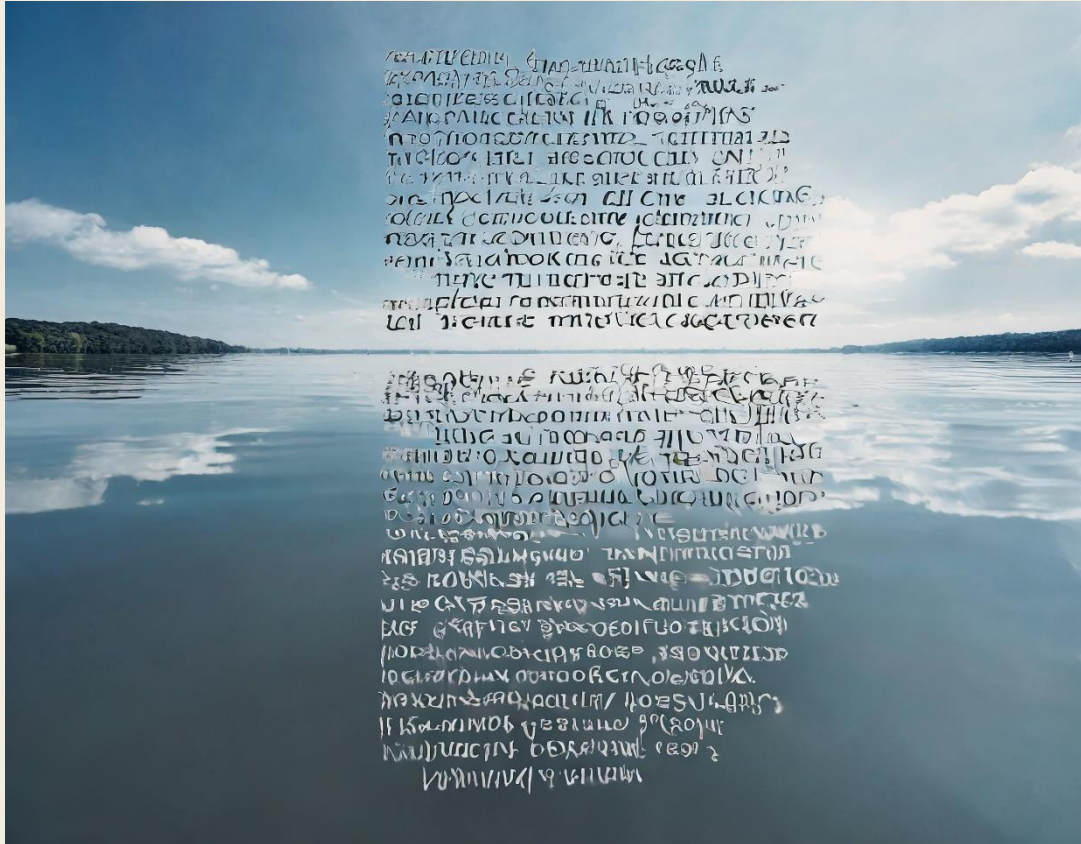
Challenges of Public Domain GenAI



- Academic integrity
- Potential for bias
- Protecting privacy & IP
- Respecting human values
- Personal development
- Career prospects
- Broader implications

Chan, C.K.Y., Hu, W. Students' voices on generative AI: perceptions, benefits, and challenges in higher education. *Int J Educ Technol High Educ* 20, 43 (2023). <https://doi.org/10.1186/s41239-023-00411-8>

An Alternate Approach



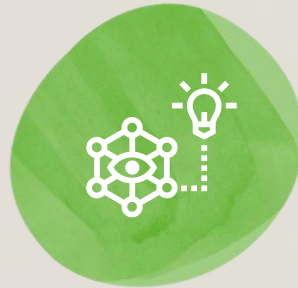
- Enterprise Generative AI
- Your brand / your voice
- Knows the context
- Embed in applications & processes
- Protect your IP
- Protect your PII

Transform the business experience with *generative AI*



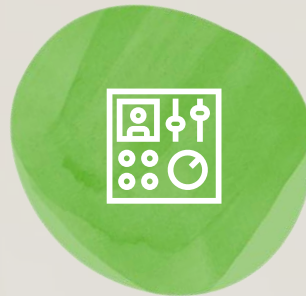
Oracle Applications

AI embedded across Oracle's cloud applications and database portfolio



OCI Generative AI Service

A new AI service with LLMs that can be fine-tuned

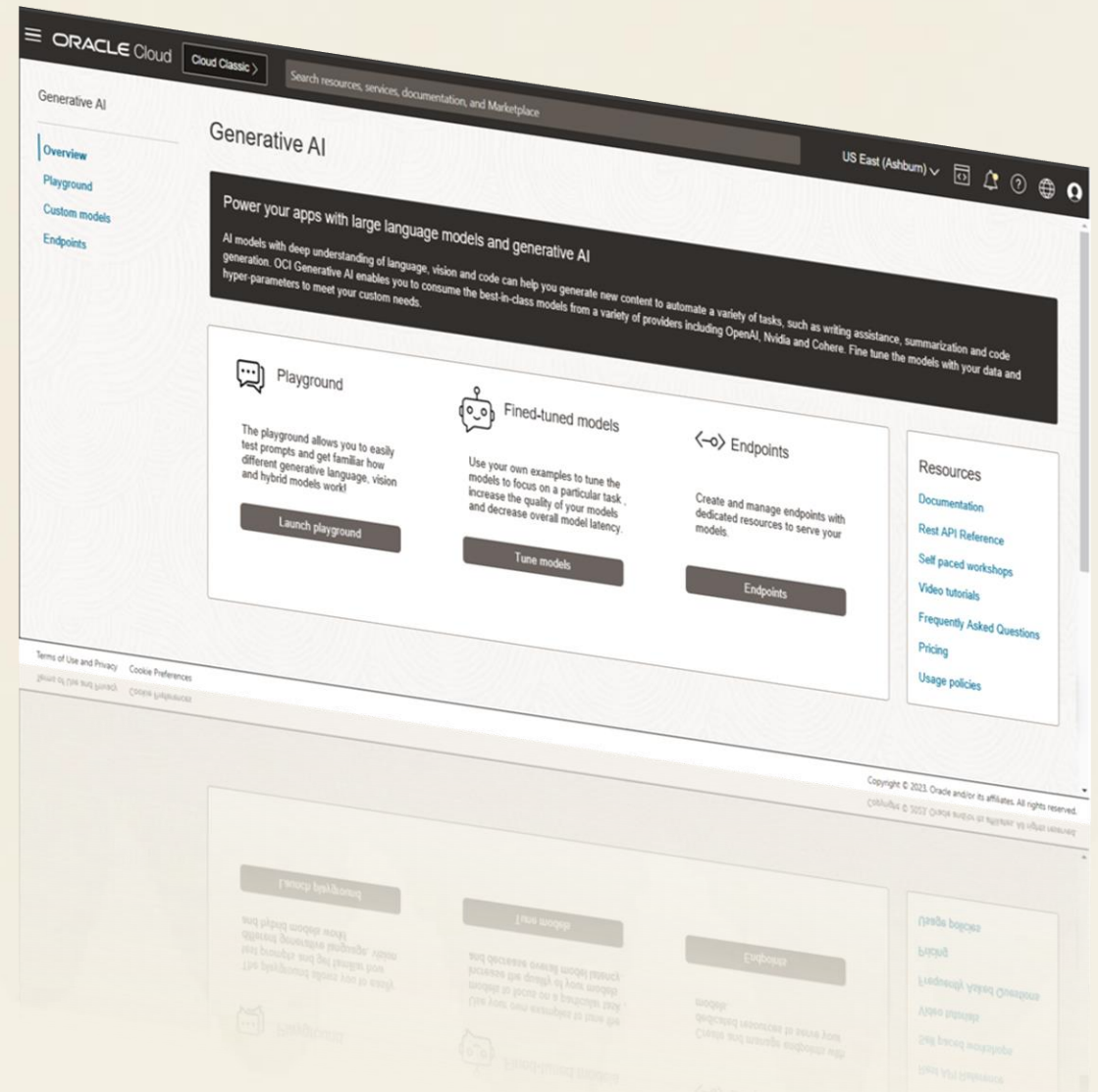


GPU Infrastructure

High-speed, low-cost AI infrastructure for model training

OCI Generative AI

- State-of-the-art foundational models
- Fine-tuning support
- Fully hosted on OCI
- Respect for customer privacy
- PAYG and single tenant, dedicated hardware



AI Services from Oracle AI

Applications

AI Services



Digital Assistant



Speech



Language



Vision



Document Understanding



Anomaly Detection



Forecasting

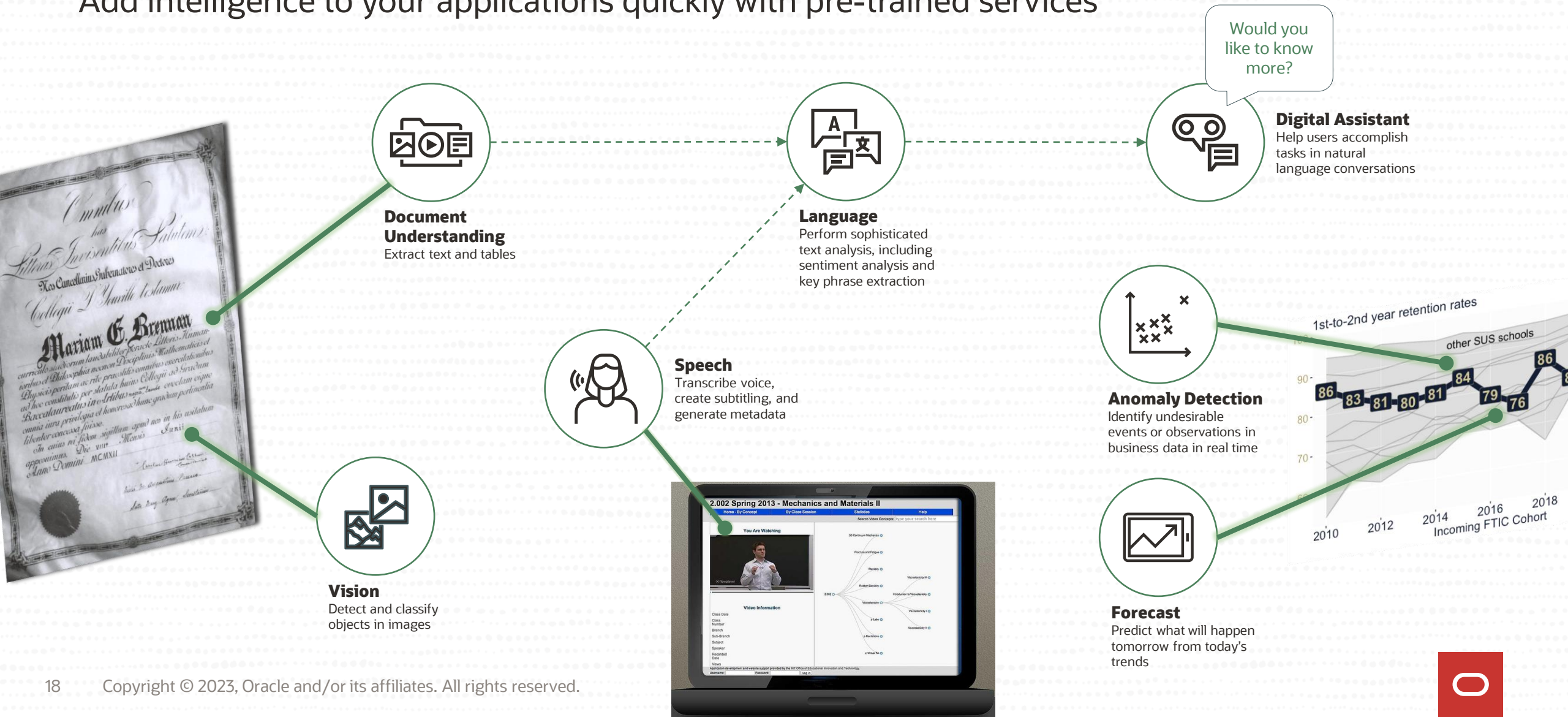
Machine Learning Services

Advanced GPU infrastructure

Data

Enhance with ready-to-go AI capabilities

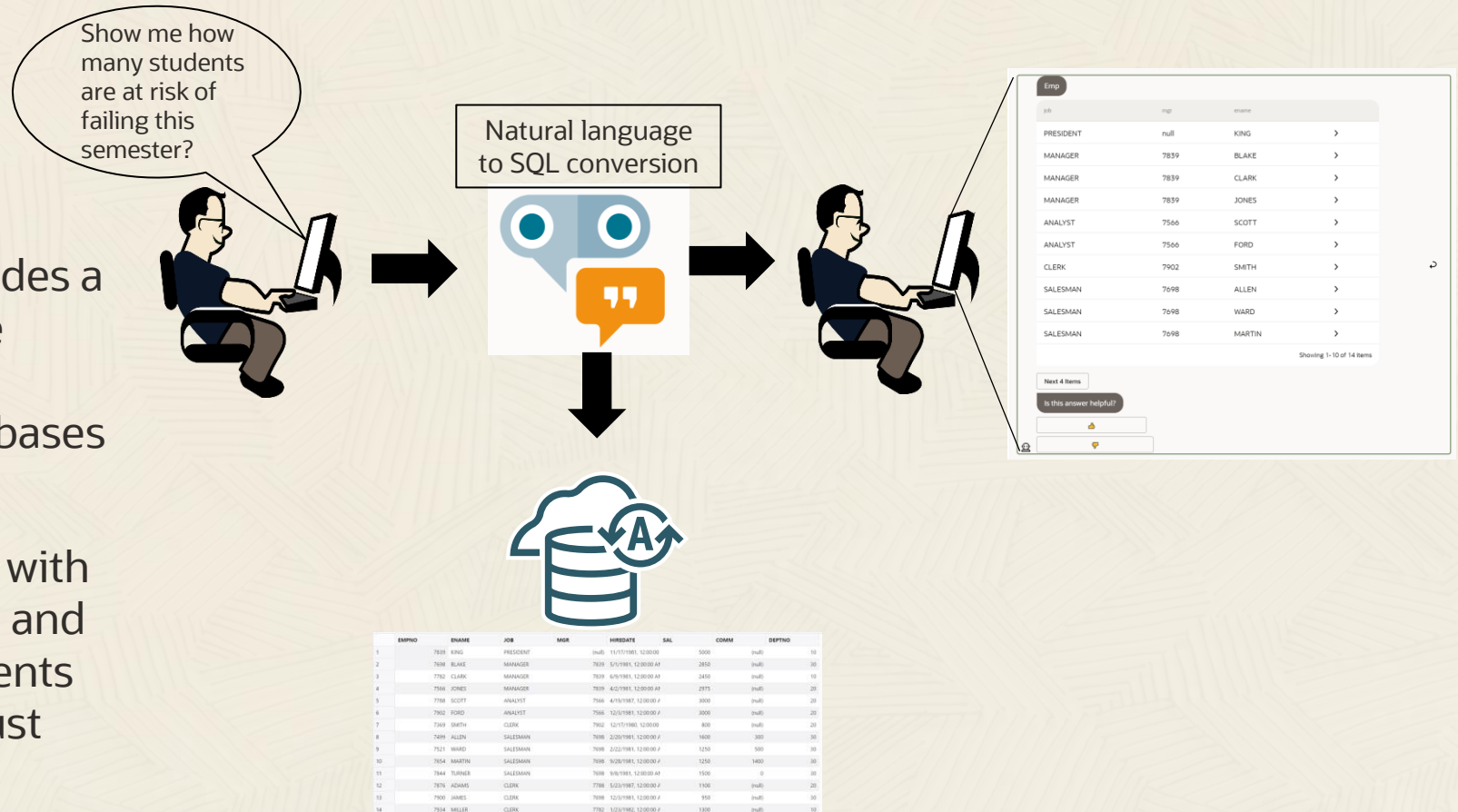
Add intelligence to your applications quickly with pre-trained services



Oracle Digital Assistant - SQL Dialog

SQL Dialog

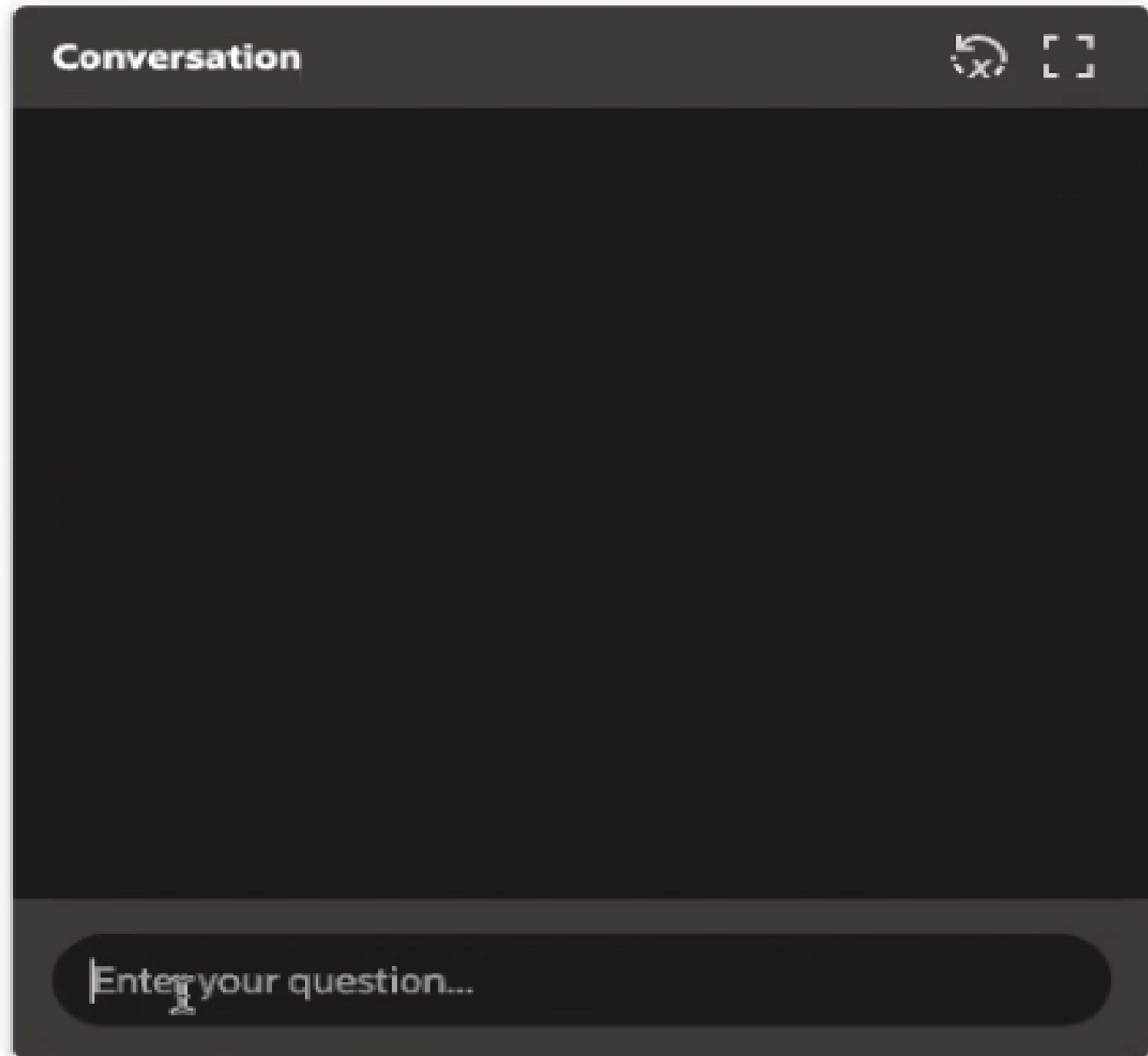
- SQL Dialog provides a natural language conversational interface to databases
- Use SQL Dialogs with small-talk, FAQs, and other answer intents to provide a robust conversational experience.



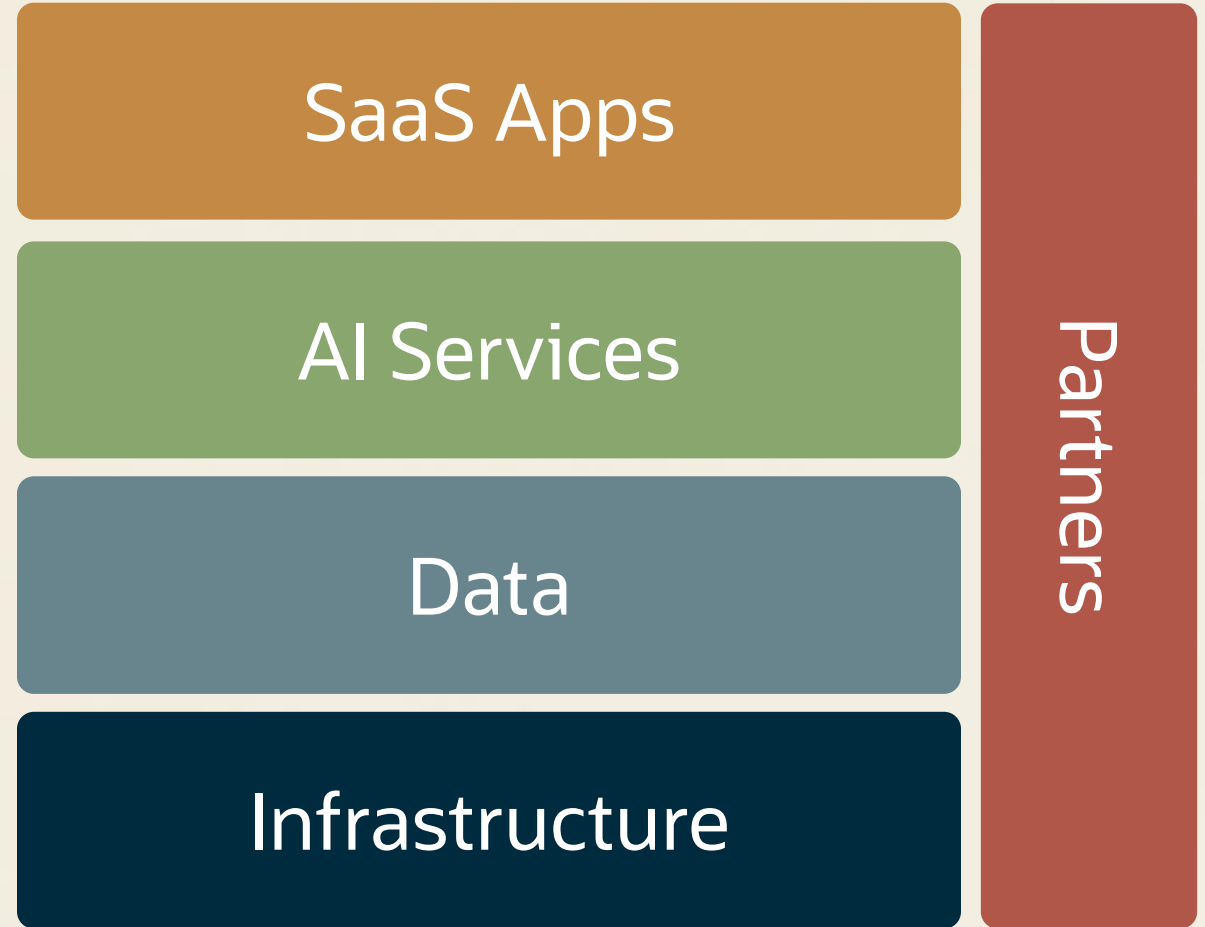
SQL Dialog

Generative AI enables ODA
to query enterprise data
sources via natural language

No need to identify all
potential queries ahead of
time!



Oracle brings AI to
the enterprise at
every layer of our
stack





Thank you