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The AI Advantage: A Practical Guide to Embracing Oracle Artificial Intelligence in Business

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Introduction

Artificial Intelligence (AI) and Generative AI in particular, experienced a breakout year in 2023.

Are you setup to understand how AI can help your business succeed?

Vertice are here to help

This eBook will walk you through all things Oracle AI, including:

- Explaining what AI is in simple terms
- Describing what Oracle AI solutions are available
- Providing example business use cases you could leverage, and their benefits



What is Artificial Intelligence?

Artificial Intelligence (AI for short) is a broad category encompassing many technologies.

These technologies work together to enable machines to comprehend, learn and act with “human-like” levels of intelligence.

Technologies such as **Machine Learning**, **Natural Language Processing** are all elements of the AI landscape.

There are many common AI interactions that we experience in our daily lives and may not even know it.

- **Digital Assistants:**
online assistance with bank / customer services
- **Virtual Assistants:**
Amazon Alexa / Apple Siri
- **Personalized content recommendations:**
via popular streaming platforms



Why is AI important for Business

AI models are tailored to your data

Organizations can utilize their own data with AI models. All data, whether structured in a database, or semi-structure or unstructured, such as text, images, audio and video are all supported.

Increased efficiency and cost savings

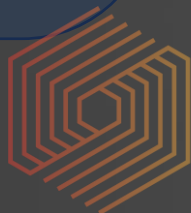
AI can help to automate repetitive and mundane tasks, allowing employees to focus on higher-value activities.

Enhanced Customer Experience

AI helps to deliver new capabilities into applications.

Virtual assistants as an example, provide a personalised experience for customers.

These are available across a range of sectors including Finance, Human Resources, Customer Service and more.



What are some examples of AI

Due to its expansive and ever-evolving nature, there isn't a definitive list of AI capabilities. However, here are five prevalent AI technologies extensively used today, either as software features or integrated through APIs.

1. Digital assistants
2. Speech recognition systems
3. Language services
4. Vision recognition
5. Document understanding



1. Digital Assistants

Digital Assistants utilize natural language processing (NLP) alongside custom algorithms for deep semantic parsing to accurately extract intent and context from conversations.

Digital Assistants can be tailored to understand business-specific vocabulary, allowing employees and customers to communicate with applications for a seamless experience.

2. Speech Recognition Systems

Generate precise real-time transcripts from natural conversations or transform recorded audio conversations into textual data for analysis using AI services.

Speech recognition now handles multiple languages, enabling instant translation between them.



3. Language Services

Identify and translate languages within written text while automatically recognizing specific content types such as names of individuals, places, products, and organizations.

These services additionally analyse the sentiment of text (emotional tone) and categorizes this as positive, negative, or neutral with a confidence score.

They can also automatically classify text-based documents based on their content.



4. Vision Recognition

Retrieves textual or visual details from both still and moving images, employing this data to fuel analytics applications.

AI tools can enhance image-based files by adding metadata tags, like object descriptions. These tagged images can then be indexed for intelligent search and retrieval purposes.

Given appropriate training, the system can identify anomalies in photographs and videos. This capability in vision recognition finds current application in manufacturing, particularly in tasks like automated quality control.

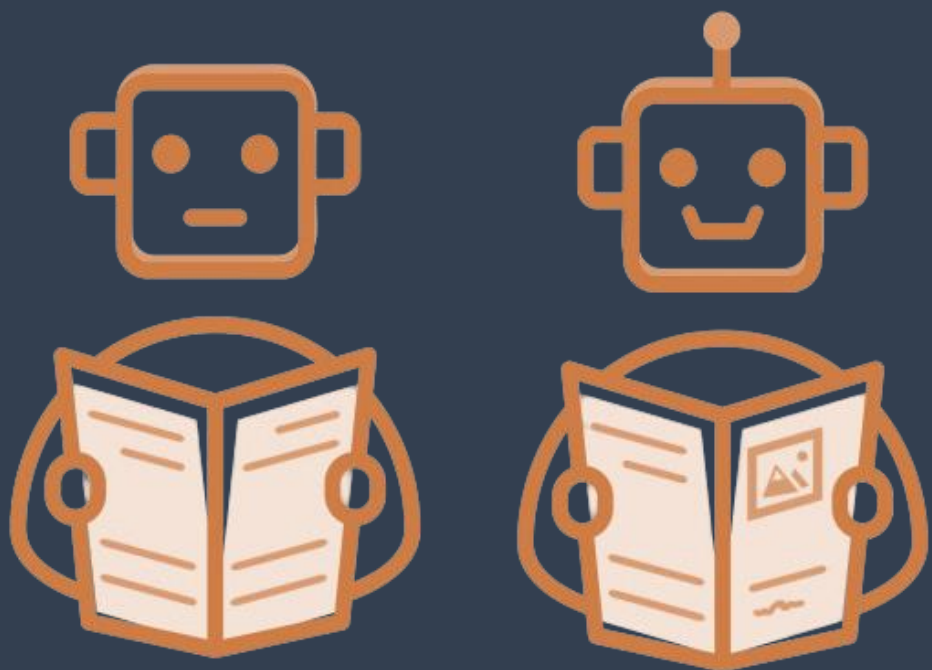


5. Document Understanding

Automates the extraction of text and key-value pairs from various digital or scanned files, **even if they are rotated, tilted, or degraded.**

This capability can assist in applications like expense processing, by interpreting receipts, or in logistics, by comprehending bills of lading.

Additionally, these tools can identify and extract table structures from documents while organizing documents into common categories.



What Oracle Services are Available?



Oracle Digital Assistant: Creating conversational interactions for both employees and customers across text, chat, and voice interfaces.



OCI Language: Pre-existing models trained on industry-specific data capable of conducting intricate text analysis on a large scale.



OCI Speech: converts recorded audio conversations into written text, supporting various languages.



OCI Vision: Technologies for visual and text comprehension that analyse scanned documents, PDFs, video stills, and photographs.



OCI Document Understanding: Utilize APIs and command-line interface tools to extract text, tables, and other essential data from document files.



3 Artificial Intelligence Business Use Cases

1 Finance

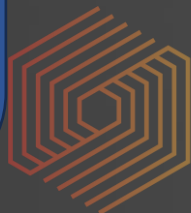
Anomaly Detection: AI algorithms can analyse large volumes of financial data, identify patterns, and detect anomalies that could indicate potentially fraudulent activities. Helping financial institutions prevent fraud and protect their customers.

2 HR

Recruitment Screening: AI can help to automate the initial screening of job applicants by analysing CV's and other relevant documents. Natural Language Processing (NLP) techniques can be used to extract key qualifications, skills, and experiences. Enabling HR professionals to shortlist candidates more efficiently.

3 Customer

Targeted Marketing: AI can segment customers based on various factors like demographics, behaviour, or preferences. Enabling businesses to tailor marketing campaigns, promotions, and offers to specific customer segments, enhancing their relevance and effectiveness.



Generative Artificial Intelligence

Business applications are **integrating Generative AI** to collaborate with and enhance other AI functionalities.

Generative AI is ultimately taking traditional AI one step further, by **generating new content**.

Some examples are:

- Personalised and engaging written content
- Drafting email responses based on a chain of emails.
- Generating synthetic data that resembles real data.

All of this is achieved by utilizing machine learning algorithms, to understand patterns and structures within existing data, allowing it to generate new outputs that resemble the original data.



3 Generative AI Use Cases

1 Assisted Authoring

Generative AI capabilities can swiftly produce content like job or new product descriptions for review, revision, and approval based on a brief prompt.

2 Personalised Recommendations

Generative AI quickly directs users to better outcomes using natural language processing.

Generative AI can provide unique product recommendations based on an individual's tastes and preferences.

3 Knowledge Summarization

Generative AI can boost efficiency by extracting key insights from multiple business data sources.

A customer service agent can request a summary of a knowledge base article to address an inquiry or receive a concise text summary from a table or chart.



Oracle AI Infrastructure

In addition to front-end AI applications, Oracle provides a robust and secure **Oracle Cloud Infrastructure (OCI)** that enables business to leverage AI capabilities.

Speeding AI Adoption with Supercluster

Oracle Cloud Infrastructure (OCI) Supercluster provides industry-leading scalability for Generative AI - ideal for training generative AI models.

With support for up to tens of thousands of NVIDIA GPUs, OCI Compute bare metal instances and VMs, providing the power needed to train and serve the next generation of AI models.



Oracle Machine Learning Services

Underpinning Artificial Intelligence is the core of Machine Learning.

Oracle's Machine Learning Services cater to data scientists, simplifying the process of creating, training, deploying, and overseeing custom machine learning models.

These services offer data science capabilities, allowing integration with preferred open-source frameworks or utilizing in-database machine learning, providing direct access to clean data.



OCI Data Science: A fully managed environment that covers the entire process of building, deploying, and managing machine learning models from start to finish.



Machine Learning in Oracle Database: An extensive data science environment tailored for peak performance within Oracle Autonomous Database or Data Warehouse configurations



OCI Data Labeling: Is a service dedicated to crafting labelled datasets for AI and ML model training, applying labels to text or images. These labels are then used to tailor models and establish shared catalogues.



Conclusion

Thank you so much for reading.

We've talked through a lot of information, but we hope you have found this eBook useful, and now feel equipped with the knowledge of how Oracle AI can help your business.

If you would like to speak to us about anything covered in more detail, or how you could leverage Oracle AI in your business, please don't hesitate to reach out to us below.

Talk to us



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