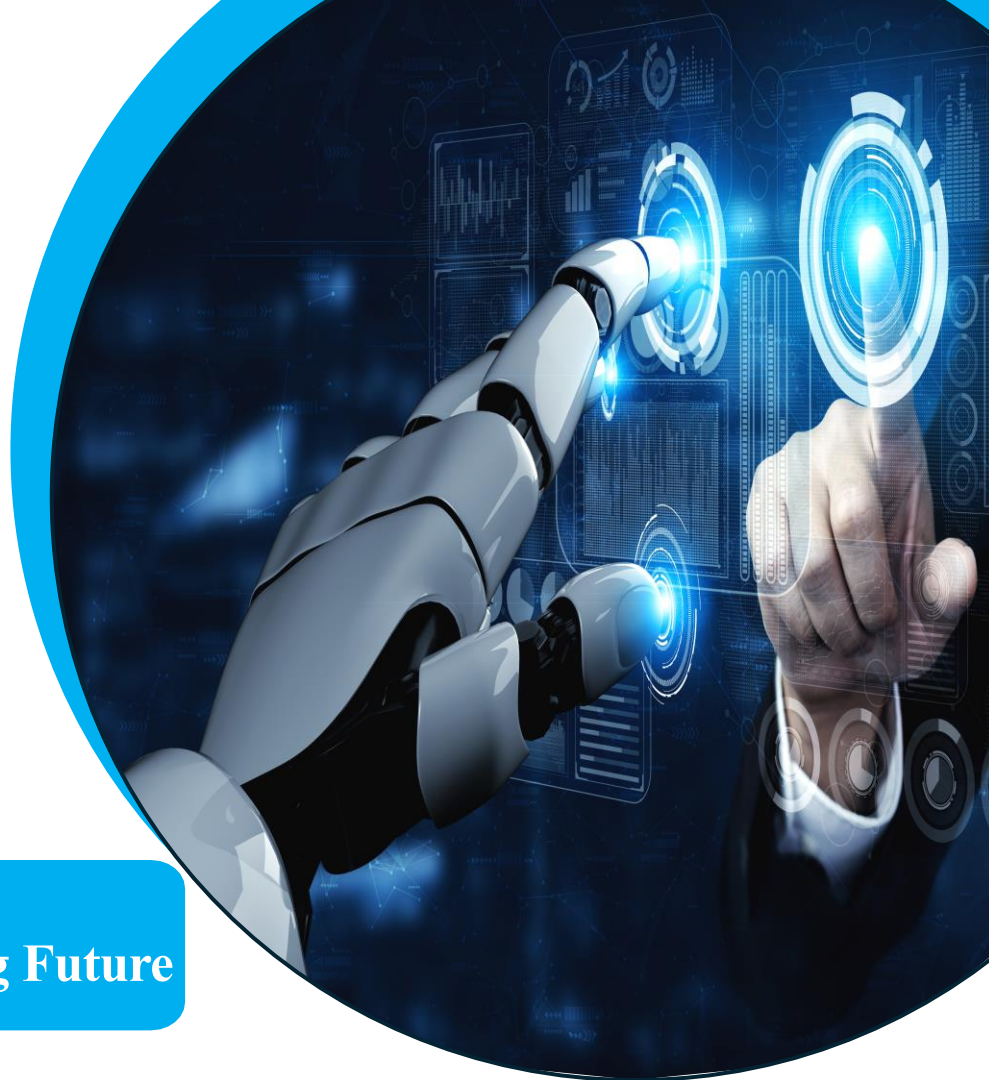


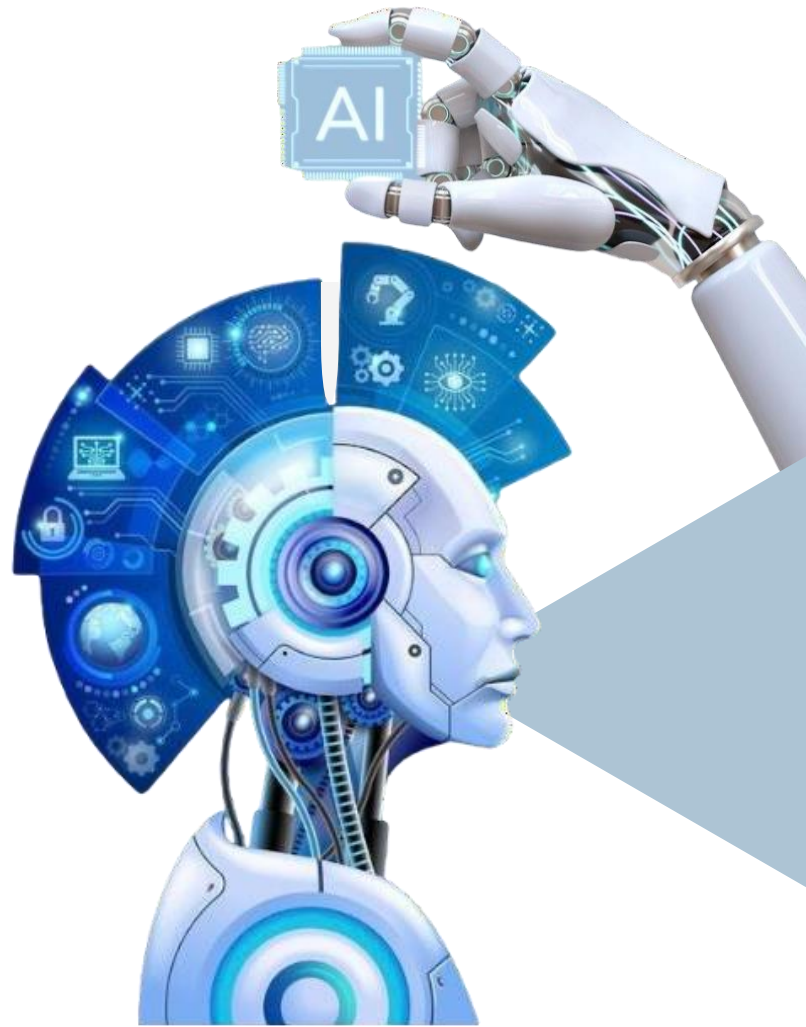
Financial Accounting

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MGM611

Lecture 10
Artificial Intelligence and Accounting Future





Introduction

outline

01

What is Artificial Intelligence (AI) ?

02

Uses of Artificial Intelligence (AI) in Accounting.

03

Key AI Tools & Applications in Accounting

04

How the big four Accounting firms use Artificial Intelligence (AI)?

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How the big four accounting firms use chatGPT?

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Can Artificial Intelligence (AI) replace Accountants?

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Accounting for Digital Assets under IFRS Standards

What is Artificial Intelligence?

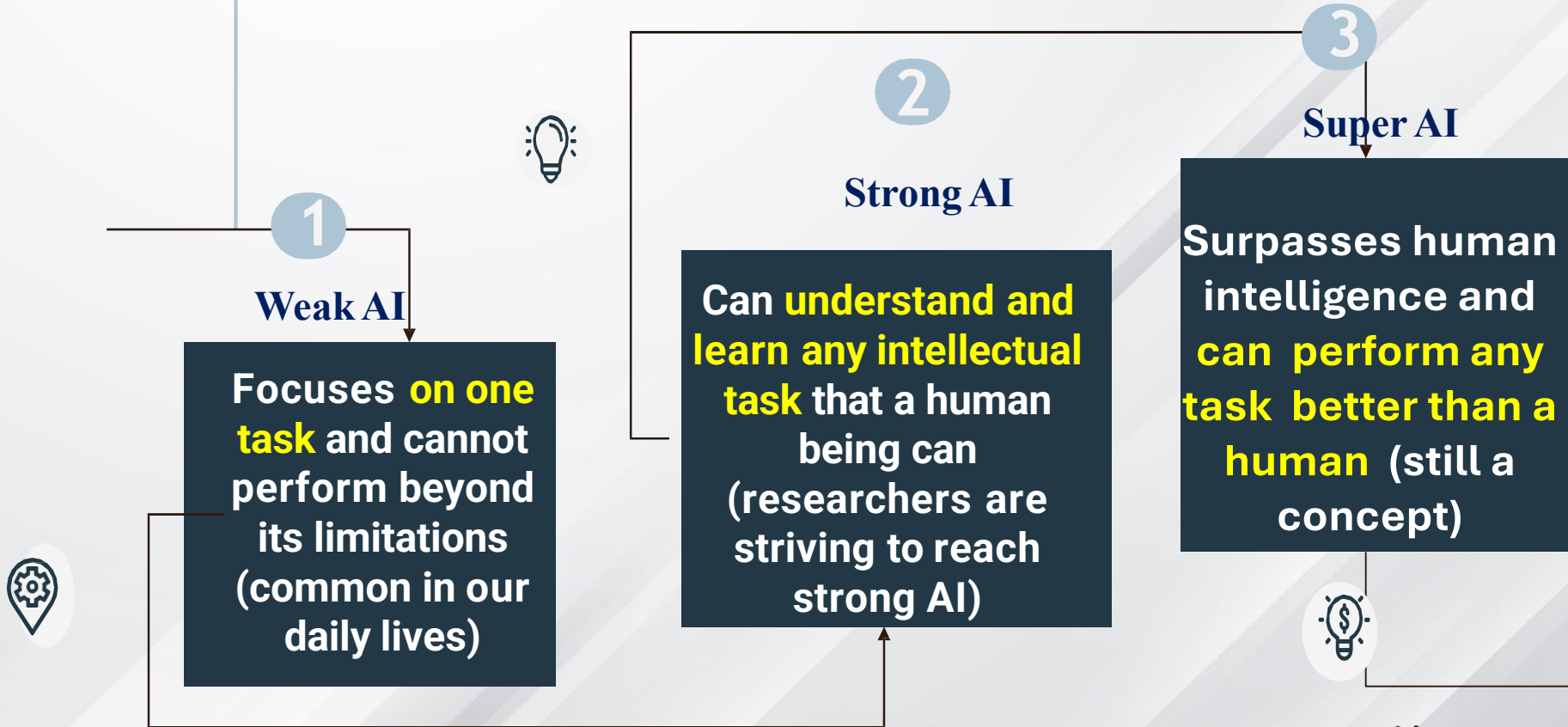
Before we jump on to the advantages of Artificial Intelligence, let us understand what is Artificial Intelligence (AI).

Artificial Intelligence (AI) : is a field of computer science that aims to create a system or machine that can **perform tasks that typically require human intelligence**, such as **learning, problem-solving, decision-making, and language understanding**.

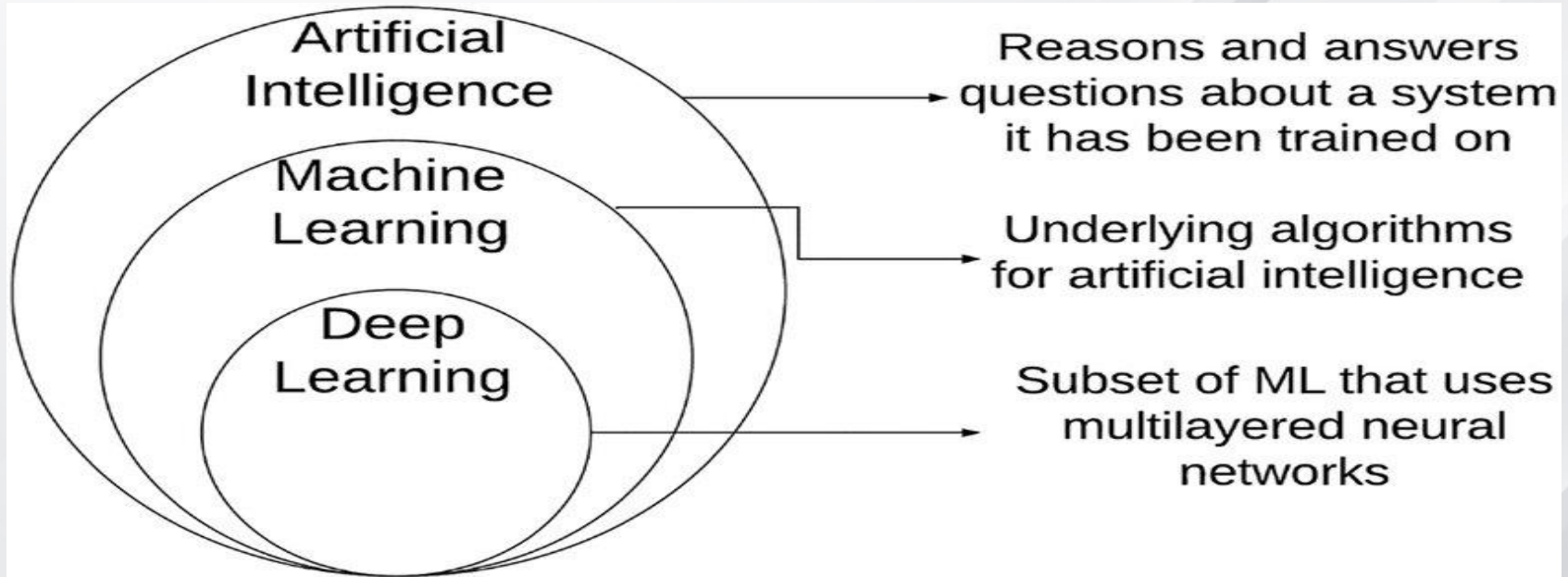
AI systems can learn from experience, adapt to new situations, and make decisions based on **data analysis** and algorithms.

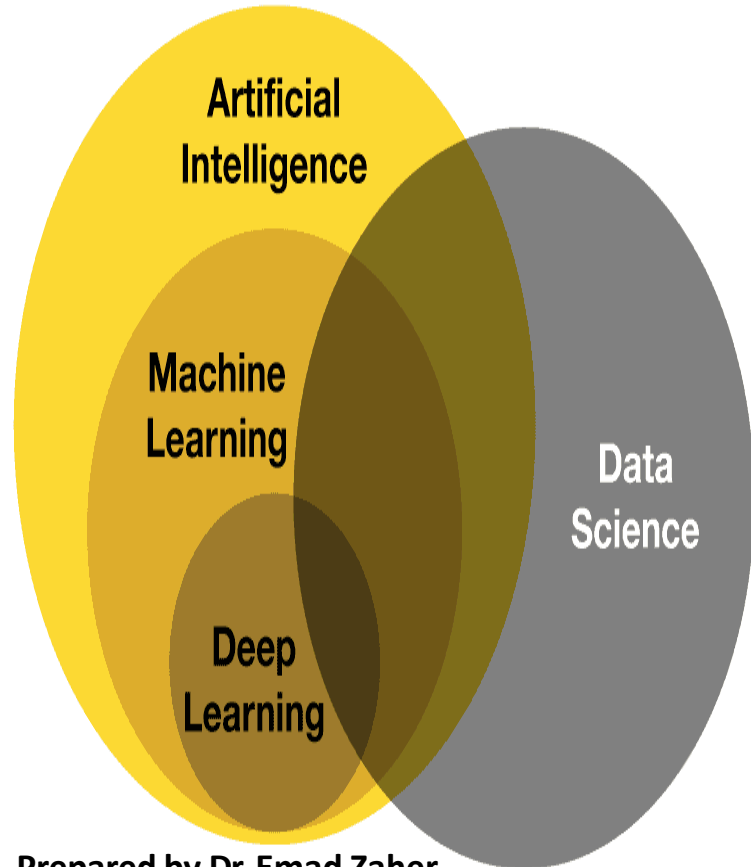


Types of Artificial Intelligence:



Building Blocks of Modern Artificial Intelligence





Machine Learning



Predictive Analytics



Recommendation Systems



Fraud Detection



Spam Filtering



Customer Segmentation

Deep Learning



Image Recognition



Natural Language Processing



Autonomous Vehicles



Chatbots



Translation

Let's begin with the advantages of artificial intelligence





4

Reduction in Human Error

One of the biggest advantages of Artificial Intelligence is that it can significantly reduce errors and increase accuracy.

5

Low Risks

Another big advantage of AI is that humans can overcome many Risks by letting AI robots do them for us.

6

24x7 Availability

Humans need breaks and time offs to balance their work life and personal life. But AI can work endlessly without breaks. They think much faster than humans and perform multiple tasks at a time with accurate results.

The uses of artificial intelligence in accounting:

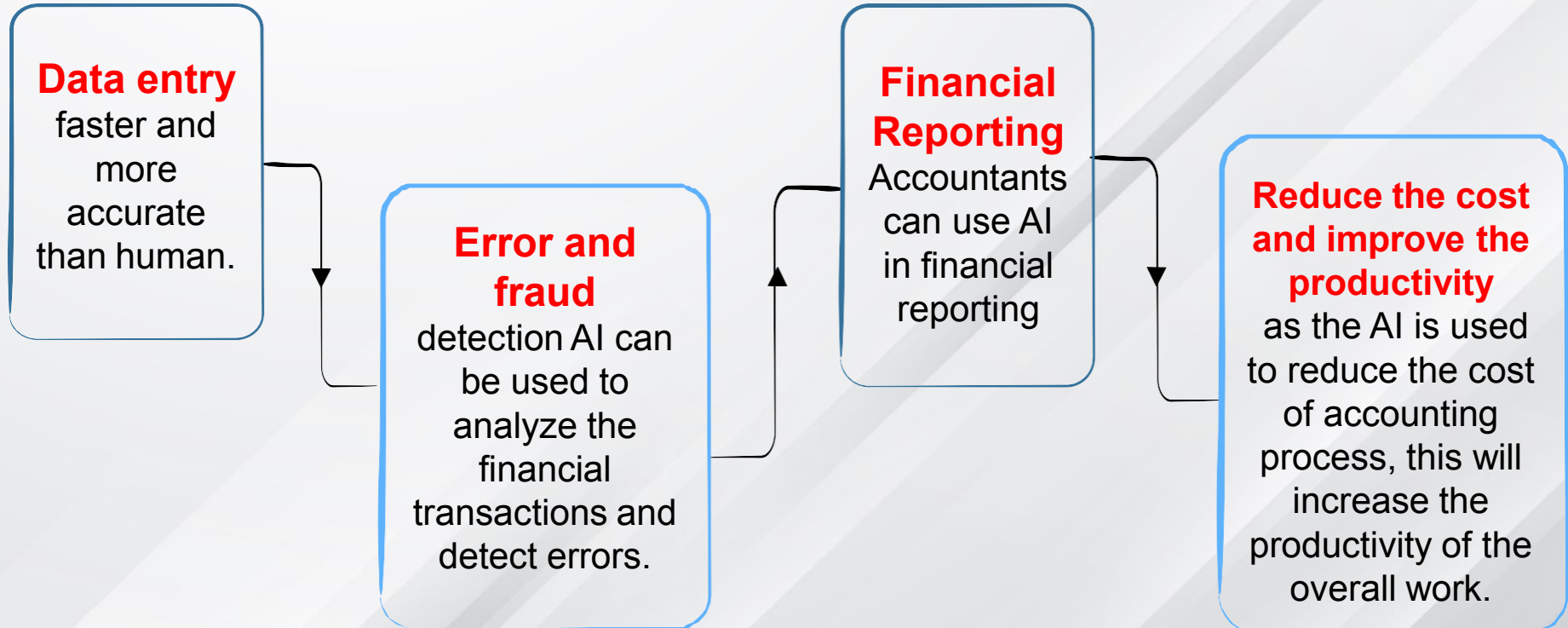
Accountants use artificial intelligence as a tool to facilitate the traditional and repetitive accounting process more accurate and faster than human accountants.

Example: Data entry

- It also can help auditors in their auditing process, specially to find out errors and fraud.
- Machines can perform time-consuming tasks, allowing humans greater productivity in the business.



AI can help Accountants to do the following:



Key AI Tools & Applications in Accounting

- **Data & Bookkeeping Automation:**

- **Dext, Nanonets:**

OCR + AI تستخدم Extract data from receipts, invoices, and bank statements.
لتحويل الورق إلى بيانات جاهزة مع توفير وقت الإدخال اليدوي.

- **Botkeeper, Docyt:**

Automate transaction categorization and reconciliation.

تتصنف العمليات المالية تلقائيًا وتعمل تسوية بين الحسابات وتساعد في اعداد قيود اليومية

- **Xero, QuickBooks (AI features):**

Offer automated cash flow insights and categorization.

مستشار مالي ذكي يتوقع التدفقات النقدية، يحل أداء العمل، إقتراح قرارات مالية، وتُتم القيود تلقائيًا، وتكشف أي أنماط غير طبيعية في البيانات.

•Expense & Invoice Management:

- **Vic.ai:**

Specializes in AI-powered invoice processing.

- **Ramp, Brex:**

AI-driven spend management solutions.

•Reporting & FP&A (Financial Planning & Analysis):

- **Datarails, Vena Copilot:**

Reduce spreadsheet work and enhance Excel reporting.

- **Futrli, Fathom:**

Provide predictive analytics and forecasting.

•Audit & Risk:

- **MindBridge AI:**

Detects anomalies and potential fraud in audit data.

- **Arya.ai:**

Focuses on risk analytics and compliance.

•Taxation:

- **Sorban**: Automates tax intake and data extraction.

- **Ascent**: Analyzes regulatory data for compliance.

•Generative AI (e.g., ChatGPT):

- Drafts emails, summarizes documents, generates journal entries, and formats spreadsheets.

How the big four Accounting firms use Artificial Intelligence (AI) ?



Deloitte

Developed an AI-powered document review platform that automates contract review and extraction processes.



PWC

PricewaterhouseCoopers

invested heavily in Natural Language Processing (NLP) to analyze" complex leases, revenue contracts.

How the big four Accounting firms use Artificial Intelligence (AI) ?



KPMG

uses AI to predict future events.



EY

**Automating its auditing processes.
Allowing AI to process up to 80% of
the content of a simple lease, leaving
a small remainder for human staff**

How the big four Accounting firms use chatGPT?

- The big four accounting firms have invested in artificial intelligence, to enhance their services and improve their client interactions.
- **Chatbots** powered by GPT (Generative Pre-trained Transformer) technology are one of the many AI tools that these firms have adopted to improve their communication with clients.





Deloitte

has developed a chatbot named "**Cortex**" that can answer questions about tax, audit, and advisory services to the clients.



PwC

has also developed a chatbot called "**Aura**" that can help clients with tax- related questions and provide personalized tax advice.



EY

has a chatbot called "**EYbot**" that can provide information on the firm's services and answer client queries.

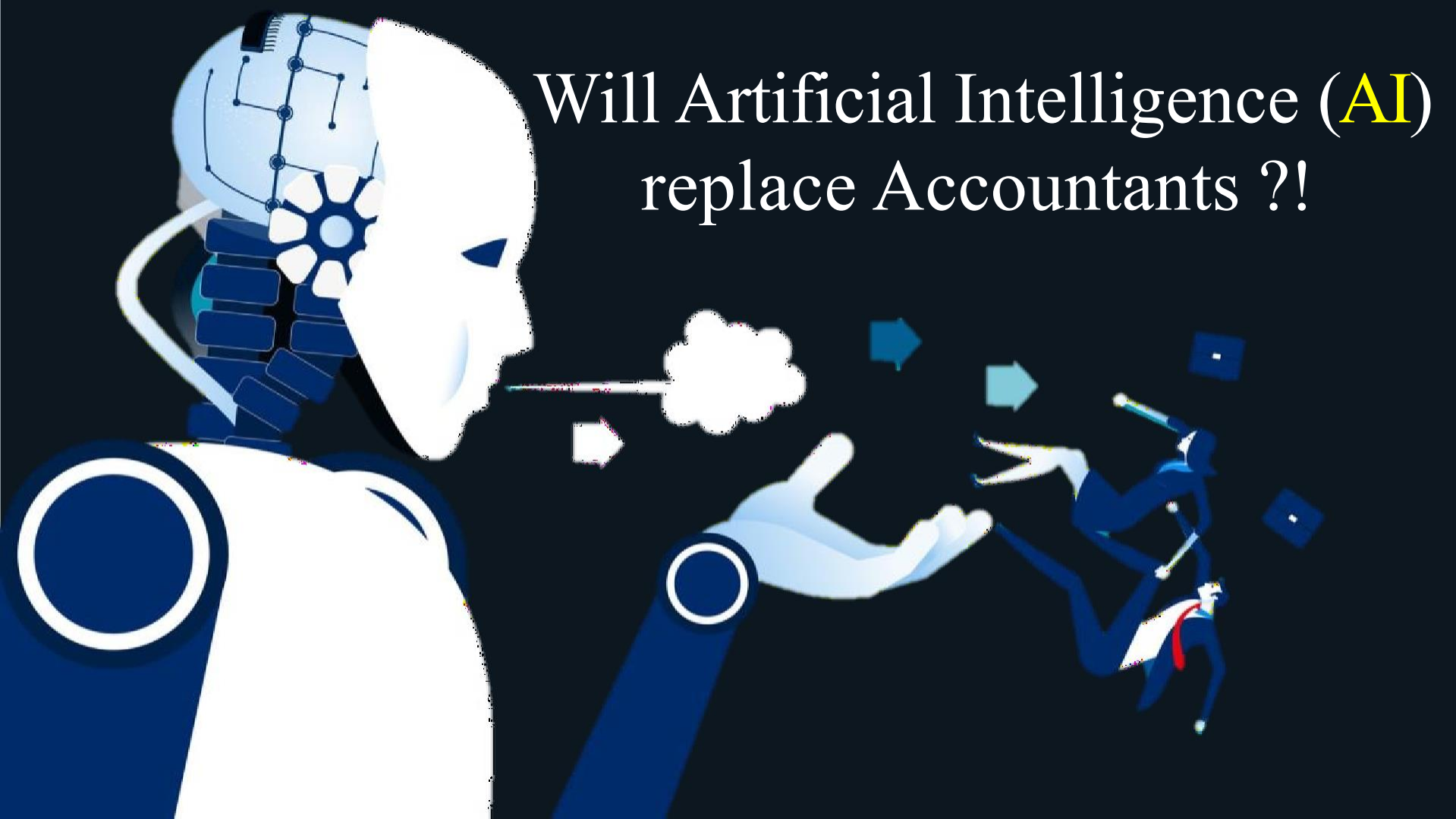


KPMG

has also developed a chatbot named "**KPMG Clara**" that can help clients with accounting and tax-related questions

These chatbots are designed to provide quick and accurate responses to clients' questions, and they are available 24/7. They can help clients save time and improve their overall experience with the firm.

Will Artificial Intelligence (AI)
replace Accountants ?!



Can AI replace Accountants?

AI can perform many of traditional and routine accounting process.

- Some studies stated that accounting is one of the **most at-risk jobs** of being replaced by Artificial Intelligence AI, specially in tasks such as **data entry and repetitive tasks** "routine tasks".
- **However**, these studies often fail to recognize that these tasks are a necessary for accountants just to be able to do more complex work and not to do all the work.

There are some reasons to explain why human Accountants are always needed:

Mistakes of AI:

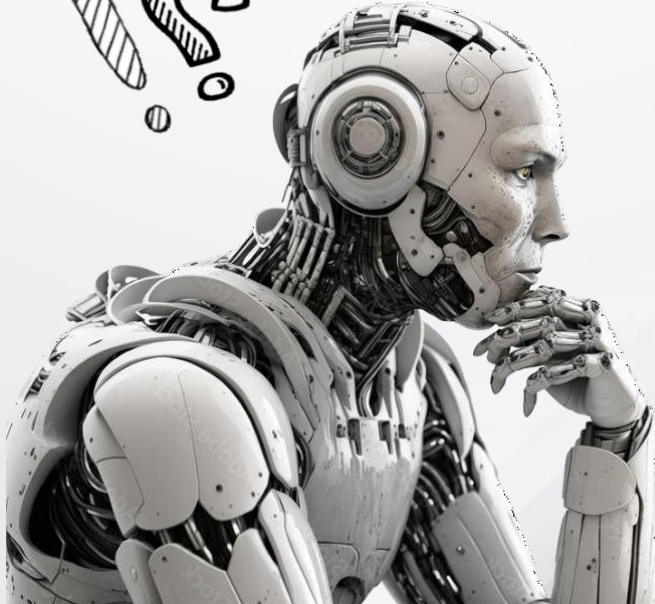
Mistakes of AI in accounting process will lead to financial losses and then legal problems. That's why the **human experiences are important**.

Communication skills:

Communication skills are also **required in accounting professions**, as the clients can't deal with only computers to perform all their work.

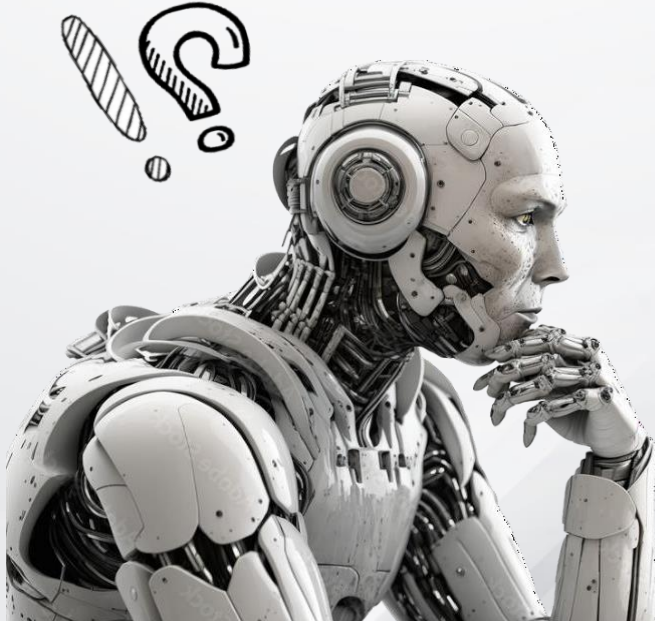
AI can't perform non-routine tasks (No creativity):

AI can't do a feasibility study for each type of businesses to make a right decisions, and to do a management consulting.



- AI can't **think critically** like experienced Accountants or solve complex problems by alone.
- AI can't **understand** each case of the clients to perform an Audit process, but it can be only a tool to help the auditor in auditing process.

In case of tax planning, clients may prefer to have a human accountant **who can understand their unique financial need** and provide personalized advice



- AI can't **perform tasks** that need creativity and innovation
- AI can't **contribute in standards setting such as** the international financial reporting standards(**IFRS**)



Challenges of applying AI

1.Data security and privacy

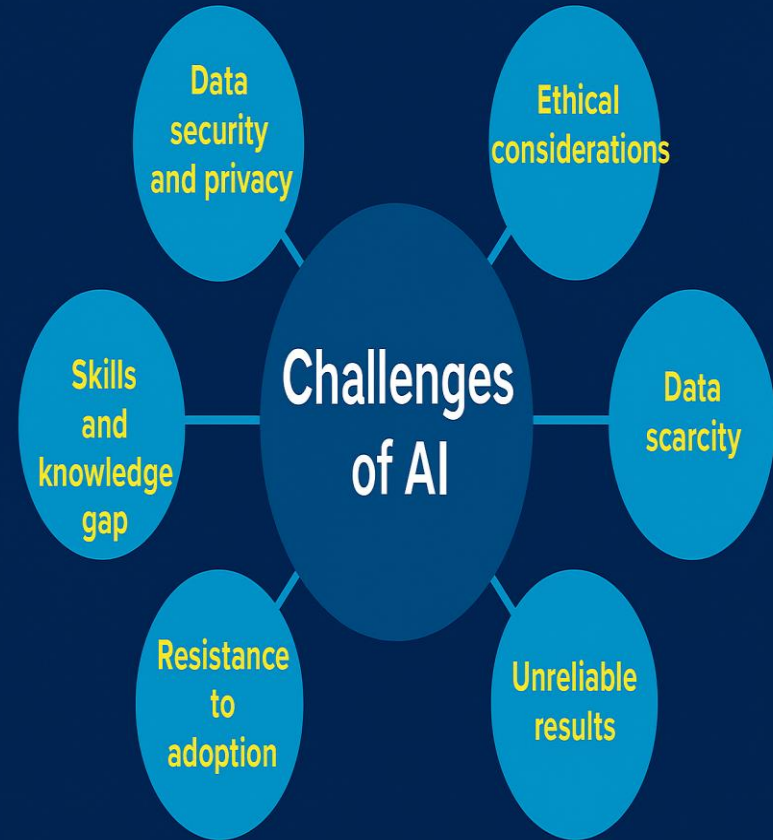
2.Ethical considerations

3.Data scarcity

4.Skills and knowledge gap

5.Resistance to adoption

6.Unreliable results



Accounting for Digital Assets under IFRS Standards

Current Status: No Dedicated IFRS Standard

- Currently **no specific IFRS standard** exists for digital assets as a separate class
- Instead, digital assets are treated under **existing standards** based on their nature and purpose
- Most commonly classified as either **intangible assets** (IAS 38) or **inventory** (IAS 2)
- This approach represents a **compromise solution** despite the unique technological and economic nature of digital assets



Source: Journal of Accountancy

Current Treatment under Existing Standards



IAS 38: Intangible Assets

Digital currencies held **not for sale** in ordinary business activities

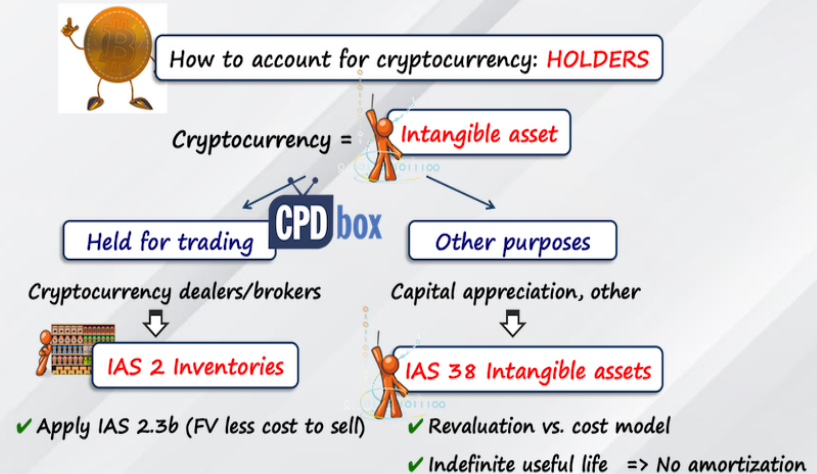
Measured at **cost** or **revaluation** if active market exists



IAS 2: Inventories

Digital currencies held for **resale** in ordinary course of business

Measured at **lower of cost or net realizable value**



Source: CPDbox

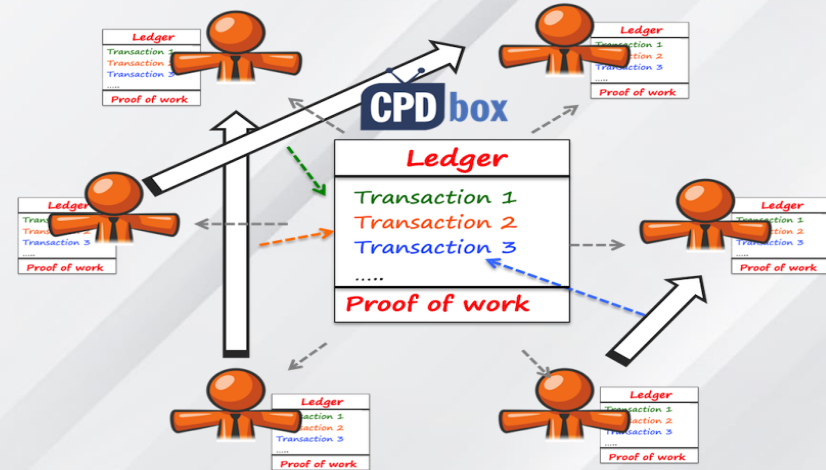
2019 IFRIC Decision on Classification



IFRS Interpretations Committee

In 2019, IFRIC issued a **clear decision** on cryptocurrency classification:

- ✓ Cryptocurrencies are **not financial instruments** in the traditional sense
- ✓ Therefore, they do **not fall under** financial instruments standards
- ✓ Should be classified as **intangible assets** or **inventory** depending on the situation



Source: CPDbox

2022 IASB Research Document: Four Alternatives

Digital Assets – IASB Considerations (AP12B)

Published in **September 2022**, the research document outlined four potential approaches for digital assets accounting

1

Educational Materials

Clarify how to apply **existing standards** to digital assets

2

Targeted Amendments to IAS 38

Require **fair value measurement** with changes in profit/loss, plus additional disclosures

3

New Standalone Standard

Cover **investment assets** (tangible or intangible), potentially including crypto assets

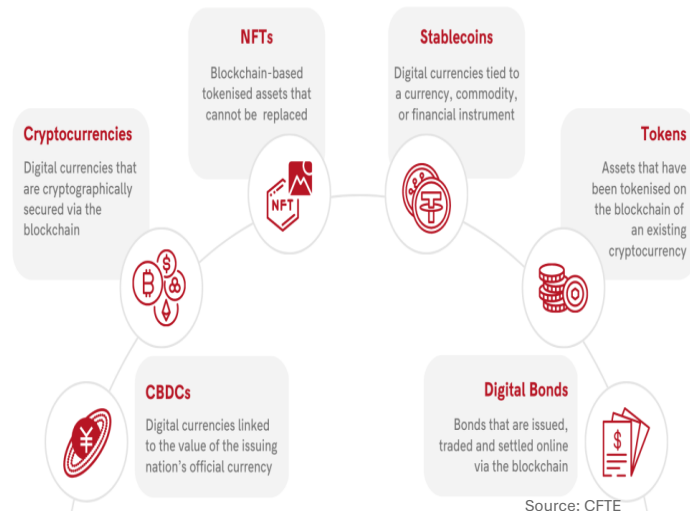
4

Extend Financial Instruments

Broaden scope of **financial instruments standards** to include certain digital asset classes

CFTE

6 Types of Digital Assets



Outcome

Despite requests for a dedicated standard, IASB decided **not to add** a formal project for crypto-assets to its work plan at that time

Challenges: Why Current Standards Struggle with Digital Assets



Nature of Digital Assets

- › Not issued by **central entity**
- › Don't represent **contractual rights** like traditional financial instruments
- › Makes classification as **financial instruments** inappropriate in most cases



Value Measurement Issues

- › **High volatility** and rapid value changes
- › Complex **technological nature**
- › **Unstable legal regulation** makes fair value measurement difficult



Diverse Holding Purposes

- › **Investment** - long-term holding
- › **Trading** - short-term speculation
- › **Payment method** - transactional use



Accounting Treatment Gap

Same asset may need **different accounting treatments**

- › **Disclosure limitations** in current standards
- › **Insufficient information** for decision-makers

Current Application of IFRS Despite Ambiguity



IAS 38: Intangible Assets

Companies owning crypto typically use **IAS 38** to record them as intangible assets

Measured at **cost** or **revaluation** if active market exists



IAS 2: Inventories

If purpose is **selling (trading)**, crypto is classified as inventory

Measured at **lower of cost or net realizable value**



Research Findings

- Many researchers and practitioners point to **clear shortcomings** in current accounting framework
- Particularly regarding **disclosure and measurement** practice

	cryptocurrencies			digital currencies			tokens		
How are digital assets different?	First cryptocurrency	Bitcoin native currency	Ethereum native currency	Stellar native currency	Ripple native currency	non-auditable digital currency	Omni Layer token	Bitcoin smartcoin	Ethereum ERC20 token
asset examples	Bitcoin (BTC)	Bitcoin (BTC)	Ether (ETH)	Lumen (XLM)	Ripple (XRP)	Central Bank National Currency	Tether (USDT)	bitAsset	Bitcoin (BTC)
issuance process	permissionless	permissionless	permissionless	one-time centralized	one-time centralized	permissionless	permissionless	permissionless	one-time centralized
transaction confirmation	permissionless decentralized	by limited number of elected witnesses	permissionless decentralized	permissionless decentralized	permissionless decentralized	private	permissionless decentralized	by limited number of elected witnesses	permissionless decentralized
transaction audit	available to anyone	available to anyone	available to anyone	available to anyone	available to anyone	permissionless	available to anyone	available to anyone	available to anyone
upgrade management	by permissionless community	by workers of bounty program	by governed community	by permissionless community	by private community	by private community	by private community	by workers of bounty program	by governed community
registration and restrictions	absent (not possible)	absent (not possible)	absent (not possible)	absent (possible)	absent (possible)	present (necessarily)	absent (not possible)	absent (not possible)	absent (not possible)
transaction irreversibility	strong	good	good	doubtfully	doubtfully	absent	strong	good	good
transaction privacy	possible	optional	very hard	very hard	very hard	impossible	impossible	optional	impossible
transaction confirmation time	20 - 60 minutes	20 seconds	10 - 40 minutes	5 seconds	5 seconds	~ 10 seconds	20 - 60 minutes	20 seconds	10 - 40 minutes
transaction per second	3 - 5	10,000 +	10 - 15	500 +	500 +	1,000 +	-	-	-

Recommendation

Need for a **new standard** that considers technological and economic nature of digital assets

Rather than adapting to **existing frameworks**

Future Direction: Where IASB is Heading



"Potential Projects" Document (2025)

IASB listed as an option to open a **new standard** covering:
"**Non-financial assets** (tangible or intangible)
held for investment"

This could potentially include **digital assets/crypto**

No Binding Decision Yet



No formal commitment that this project
will be **officially opened**

No guarantee it will become a **final standard**
IASB assessment: matter is **complex** and
requires comprehensive study



Analysts' Expectations

Even if IASB opens a project, it might take **several years** before a new standard is finalized



Comprehensive study needed for: **market dynamics, asset types, usage patterns, rights, liquidity, and risks**

Digital Assets



Cryptocurrency

A digital currency in which transactions are verified and records maintained by a decentralized system using cryptography, rather than by a centralized authority.



Platforms

Consists of many services, representing a unique collection of software or hardware services of a company used to deliver its digital strategy.



Decentralized Applications

Any application software that can be used by a computer, mobile device, or tablet to perform useful tasks.



Non-Fungible Tokens (NFTs)

A digital file whose unique identity and ownership are verified on a blockchain.



Key Considerations

Need to address
technological uniqueness
of digital assets
Balance between **practical application** and **theoretical framework**

Conclusion: Key Takeaways



Current Status

No **dedicated IFRS standard** for digital assets
Treated under **existing frameworks** (IAS 38 or IAS 2)



Challenges

Technological uniqueness of digital assets
Volatility and measurement difficulties
Diverse purposes for holding crypto



Future Direction

IASB considering **new standard** for investment assets
No **binding decision** yet
Process may take **several years**



Industry Recognition

Need for **dedicated standard** widely acknowledged
Recent studies recommend **new approach** rather than adapting existing frameworks



Thank You