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# ARTIFICIAL INTELLIGENCE IN ISLAMIC STUDIES: AN OVERVIEW OF CURRENT TRENDS AND FUTURE RESEARCH DIRECTION

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# Agenda

**01 AI explained**

**02 AI and Legal Works: Uses and Failures**

**03 AI & Emerging Issues**

**04 Legal Framework – Global Attempts**



# ARTIFICIAL INTELLIGENCE MARKET



**\$515.31 Billion**  
2023

**\$621.19 Billion**  
2024

**\$2,740.46 Billion**  
2032

**CAGR 20.4%**  
2024-2032

**HI** in simple term, what is AI

Artificial Intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. It involves developing systems that can perform tasks that typically require human intelligence, such as perceiving, learning, reasoning, problem-solving, and decision-making.

AI systems are designed to learn from data, identify patterns, make predictions or decisions, and take actions in response to new situations or information. Some examples of AI applications include voice assistants (like Siri or Alexa), facial recognition systems, recommendation engines, self-driving cars, and game-playing programs like chess engines.

The goal of AI research is to create intelligent machines that can mimic human cognitive functions and perform tasks more efficiently, accurately, and consistently than humans can. AI systems use various techniques, including machine learning, deep learning, natural language processing, computer vision, and expert systems, to achieve this goal.

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HI For layman, what is AI?

For a layperson, artificial intelligence (AI) can be described as the capability of a machine or computer program to mimic human intelligence and perform tasks in a smart and intelligent way, similar to how humans think and make decisions.

HI In one word, what represents AI?

If I had to represent AI in just one word, it would be:

Intelligence

AI is fundamentally about creating artificial or machine-based systems that can exhibit intelligent behavior analogous to human intelligence.

HI In one word, what is the biggest enemy of AI?

Bias



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## USE OF AI IN LEGAL WORKS

Legal Research

- Case analysis; Patent search; Copyright search; Statutory analysis; Literature review

Crime prevention & Detection

- Criminal register/profiling; Children protection; Facial recognition; Fake news identification; Emergency response

Use by Court

- Case management; Quantum of damages; Sentencing (e.g. in Malaysia)



# When AI Kills

News | Israel-Palestine conflict

## 'AI-assisted genocide': Israel reportedly used database for Gaza kill lists

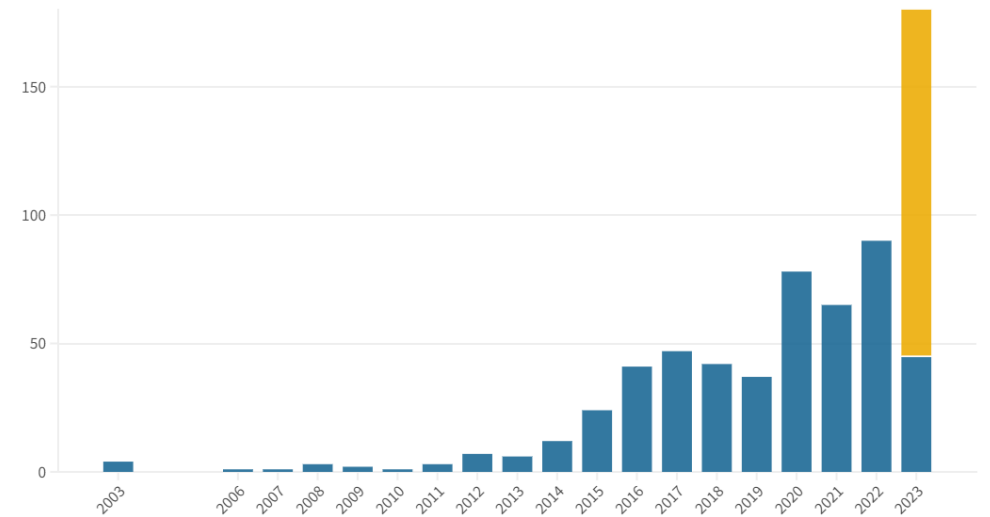
*Two Israeli media outlets report the Israeli military's use of an AI-assisted system called Lavender to identify Gaza targets.*



### Newsweek

#### AI Incidents: Rising

■ Incidents ■ Projected



Source: AI Incident Database



## Uber's self-driving operator charged over fatal crash

17 September 2020

Share

## Potentially deadly bomb ingredients are 'frequently bought together' on Amazon



Siobhan Kennedy  
Washington Correspondent

A Channel 4 News investigation can reveal how Amazon's algorithm can guide users to the chemical combinations for producing explosives.

## Google Photos Tags Two African-Americans As Gorillas Through Facial Recognition Software



Maggie Zhang Forbes Staff  
Tech

*I write about technology, innovation, and startups.*

Follow

## Instagram uses 'I will rape you' post as Facebook ad in latest algorithm mishap

When Guardian reporter Olivia Solon was sent a rape threat, she posted a screenshot on Instagram. Then the Facebook-owned company made it an ad



Julieanne Smolinski  
@BoobsRadley

Follow

So my (beloved!) ex-boyfriend's apartment caught fire this year, which was very sad, but Facebook made it worth it.

### Your Year In Review

James, here's what your year looked like!

🔒 Only you can see this



9:18 PM - 28 Dec 2014

3,214 Retweets 4,143 Likes



# Algorithmic Failures

## Tesla Fires Back After Fatal Model S Autopilot Crash

Fortune this week examined the timing between the deadly accident and a huge stock sale by Tesla and CEO Elon Musk.



By Angela Moscaritolo July 7, 2016



Dear Eric Griffith,

Earlier today, we accidentally sent you an email from Amazon Baby Registry. We apologize for any confusion this may have caused.

Sincerely,

The Amazon Baby Registry Team



# Emerging Legal Issues Surrounding Artificial Intelligence

## Agency in Contract

- AI has been used to manage commercial transactions, starting from pre-sales, sales, and post-sales.
- Concerns arise over the status of the agency of AI substituting human agency.

## Privacy & Security

- With a bulk of information being stored and processed by AI, questions arise on the fair processing rules: consent, minimization, security, and non-human decision making.

## Consumer Protection

- When more accidents are caused by AI, who will be responsible to compensate the victims?
- If the AI falls under the high-risk system, has the risk assessment been complied properly?
- Are people informed about all the necessary information?

## Algorithmic Biases

- Biases are the biggest enemy of AI. Have the AI developers and deployers considered the bias risks?
- When AI is used in a non-developers' countries, have the programmes been adjusted to suit the local circumstances and to avoid localized biases?

## Control & Responsibility

- Off all the risks and potential liabilities above, who will assume responsibility in the case of default?
- Has there been a clear allocation of liabilities between Developers, Deployers, Users, and End-users?



# EU ARTIFICIAL INTELLIGENCE ACT



## Objectives:

- To ensure that AI systems placed on the Union market and used are **safe and respect existing law on fundamental rights** and Union values;
- To ensure **legal certainty** to facilitate investment and innovation in AI;
- To enhance **governance and effective enforcement** of existing law on fundamental rights and safety requirements applicable to AI systems;
- To facilitate the development of a single market for **lawful, safe and trustworthy AI applications** and prevent market fragmentation.

## What It Does:

- Creates harmonized **rules for placing AI on the EU market**.
- Applies to **the EU and any third-country** providers and deployers in the EU market.
- Centers around a **risk-based approach**.
- **Prohibits use** of certain AI systems
- Provides specific requirements for **high-risk systems**.
- Creates harmonized **transparency rules** for certain AI systems.

# OTHER INITIATIVES

## CHINA

- Interim Measures for the Management of Generative AI Services
- Deep Synthesis Management Provisions
- AI guidelines and summary of regulations
- Scientific and Technological Ethics Regulation
- Next Generation AI Development Plan

## UAE (DUBAI)

- DIFC Regulation 10 on Processing Personal Data Through Autonomous and Semi-Autonomous Systems

## USA

- AI Training Act
- National AI Initiative Act (Division E, Sec. 5001)
- AI in Government Act (Division U, Sec. 101)
- Algorithmic Accountability Act [DRAFT]
- National AI Commission Act [DRAFT]

## SINGAPORE

- Model AI Governance Framework





# MODEL ARTIFICIAL INTELLIGENCE GOVERNANCE FRAMEWORK PDPC SINGAPORE (21.01.2020)

## Guiding Principles



Decisions made by AI should be  
**EXPLAINABLE, TRANSPARENT & FAIR**



AI systems should be  
**HUMAN-CENTRIC**

## From Principles to Practice



### Internal Governance Structures and Measures

- Clear roles and responsibilities in your organisation
- SOPs to monitor and manage risks
- Staff training



### Determining the Level of Human Involvement in AI-augmented Decision-making

- Appropriate degree of human involvement
- Minimise the risk of harm to individuals



### Operations Management

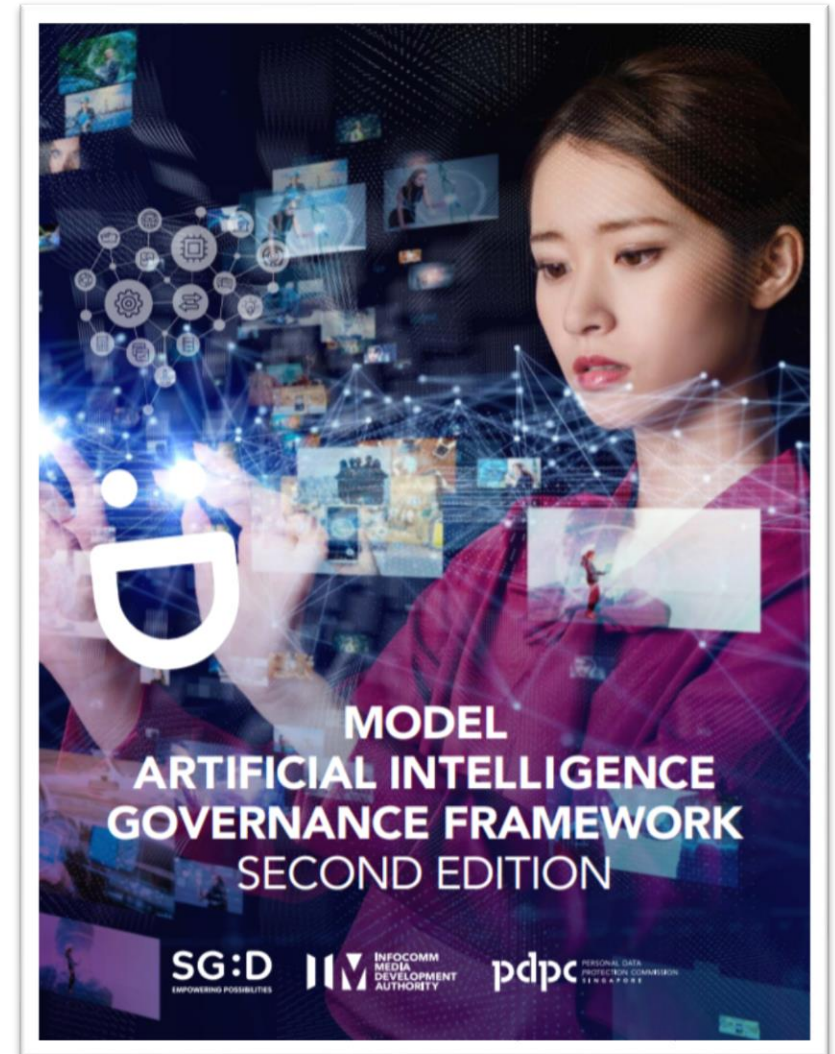
- Minimise bias in data and model
- Risk-based approach to measures such as explainability, robustness and regular tuning



### Stakeholder Interaction and Communication

- Make AI policies known to users
- Allow users to provide feedback, if possible
- Make communications easy to understand

Source:



# Takeaways – Future Directions



01

AI will reshape the legal works and legal research in the decade to come

02

With more leverage to come, risks and challenges are unknown. But fundamental principles remain

03

AI is led by innovation, law is the carrier, not barrier

04

Law and lawyers, traditionally, follow the innovation, but this time must follow fast

05

Future research is crucial on the Responsible Use of AI



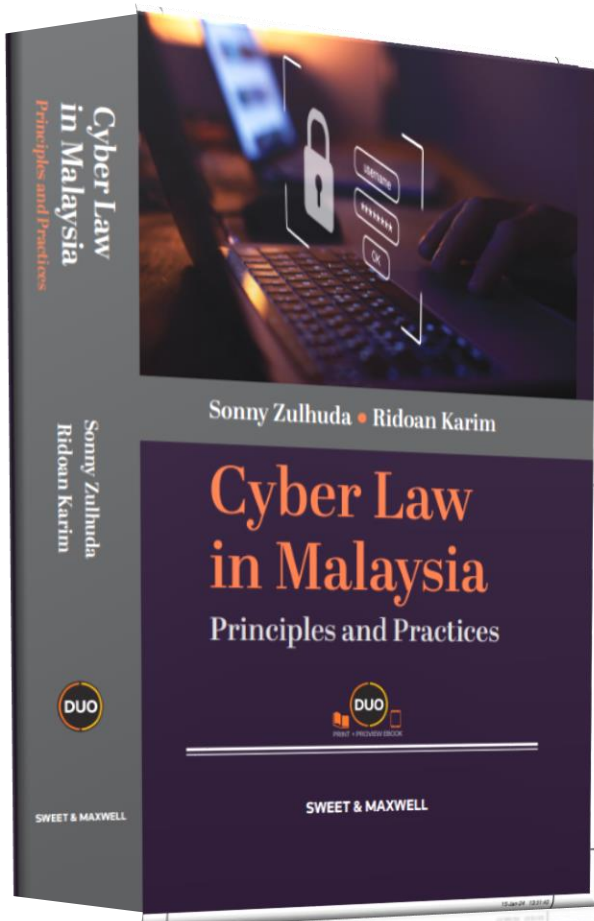
# Artificial Intelligence IS ABOUT ACCOUNTABILITY

“

وَلَا تَقْفُ مَا لَيْسَ لَكَ بِهِ عِلْمٌ إِنَّ السَّمْعَ  
وَالْبَصَرَ وَالْفُؤَادَ كُلُّ أُولَئِكَ كَانَ عَنْهُ  
مَسْئُولًا

*Do not follow that of which you have  
no knowledge. Surely the hearing, the  
sight, the heart - each of these shall  
be called to account  
(Al-Isra', Chap. 17:36)*

”



# THANK YOU DR SONNY ZULHUDA

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