

Artificial Intelligence in Judicial Systems: Evidence from the United Kingdom, China and Malaysia

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ABSTRACT

The advancement of artificial intelligence in the world can be observed through many aspects but less in the judicial system especially in Malaysia. Judicial system is often perceived as a sacred entity where it requires a vivid separation with the progressive of technologies. The problem arises from an increasing number of litigation cases that exceed the workforce and enforcement resources needed to handle them efficiently. As a result, justice can only be served after several years. The objective of this paper is to analyse the application of artificial intelligence in the United Kingdom, China and Malaysia's judicial system and how it provides a positive impact towards the country's judiciary through doctrinal legal research. It is observed that the application of artificial intelligence is less in the United Kingdom and Malaysia compared to China. Furthermore, it is found that there is a high possibility of incorporating artificial intelligence into the Malaysia judicial system through the machine learning system. In conclusion, the time has come for the revolution of artificial intelligence in the judicial system.

Keywords: Artificial intelligence; Judicial system; United Kingdom; China; Malaysia

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1. Introduction

The earlier artificial intelligence (AI) conference in the United States symbolises the historical moment, as it marked the birth of AI in the world (Cui, 2020). Throughout the years, AI has progressively developed to suit the needs of humanity, which subsequently contributes to economic growth. For instance, the introduction of Siri, an AI system that



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helps users using voice recognition technology, the self-driving car called Tesla, which provides drivers with the option of autonomous driving which originally emerged from ChatGPT, which provides similar human-like conversation and customised responses according to one's request. Even with these developments, the implementation of AI in the legal system is still extremely limited and remains far behind other professional sectors' digital development.

There is a possibility that, due to history, the judicial system is viewed as a sacred entity that leads to people being reluctant to incorporate it arbitrarily. This careful mindset is influenced by the generalisation of the legal system as an essential component of justice and stability. However, this does not mean there are no attempts to incorporate AI into the judicial system. In an effort to improve the legal system and generate legal arguments, scholars started looking into how ideas from computer science and artificial intelligence may be used in the legal system in the middle of the 20th century (Maliki et al., 2023). Additionally, the establishment of International Conference on Artificial Intelligence and Law (ICAIL) provides a platform for researchers to exchange ideas and discussions on integration of AI into the legal system (Maliki et al., 2023). This conference gathered specialists to discuss how AI might be applied to secure justice, address legal difficulties, and increase efficiency. These initiatives highlight the increasing possibilities for applying AI to enhance the legal system while preserving its fairness and integrity. AI has the potential in the judicial system as it develops, providing assistance to legal practitioners with new alternatives.

2. Method of Artificial Intelligence in Judicial System

The definition of AI as suggested by Abdul Manap, N. (2020) is '*an autonomous entity that is able to make its own judgement through an independent evaluation of choices*'. This correlates with the unique features of AI itself, which are able to independently conduct its own task and enhance its performance through feedback from users (Themeli & Philipsen, 2021).

There are multiple types of AI technologies. A specific system that has already made significant contributions to the judicial system is the Machine Learning system (ML). AI utilises machine learning method to generate algorithms that facilitate decision-making process by extracting patterns from extensive databases (Rosili et al., 2020). This system can be further separated into three types; supervised learning, unsupervised learning and reinforcement learning (Patreliuk et al., 2024). In supervised learning, data is labelled so that the system can find patterns and predict future events based on those labels and unsupervised learning, on the other hand, uses unlabelled data to identify patterns based on how the data is used (Dina et al., 2025). Reinforcement learning refers to a computational approach whereby a system learns from data through iterative interactions with an environment, refining its pattern recognition and decision-making processes based on feedback.

This system is famous in many judicial applications around the world such as the system of Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) that established in the United States that creates algorithms for the likelihood for the accuser to re-committing similar crime in the future to determine sentencing, parole and etc (Patreliuk et al., 2024). Similarly in the Netherlands, the utilisation of a software programme known as ZODIAC that helps with complex criminal investigations that aim to improve efficiency and reduce the duration of investigation process (Patreliuk et al., 2024).

Natural Language processing (NLP) is another extension of AI that analyses data information similar to human approaches (Chen et al., 2024). The processing of data can be in various methods such as syntax or semantic where the latter will analyse the sentences based on the context rather than literal meaning using massive data to produce word predictions in more structured form (Khalid, 2024). This method is often enhanced by the usage of deep learning. Deep learning is applied in NLP through the artificial neural network and big data to mimic the functioning of the human brain and produce patterns to contribute to the prediction (Bharadiya, 2023). This prediction method has the potential to be applied in various aspects of the judicial system, such as prediction on the likelihood of possible crime committed in the future, or prediction on percentage of successful cases or prediction of cases that have similar principles or judgment.

A particularly compelling feature is that these three systems: machine learning, natural language processing and deep learning, can be utilised together in one platform to expedite their services, which is not limited to legal practitioners (Sharifani & Amini, 2023).

This article aims to discuss the position of the United Kingdom as the Malaysian legal system is based on the common law system originating from the United Kingdom. It will also analyse the advance implementation of the AI system in China and how it relates with the legal system of Malaysia. There will also be an explanation of AI in the Malaysian legal system, highlighting potential areas for developments and reform.

3. Implementation of Artificial Intelligence in Judicial System

The latest technology in judicial technology is represented by the combination of deep learning, machine learning, and natural language processing into a single platform. The transition from theoretical capability to practical implementation is not consistent. From the basic common law structures to the highly automated ‘smart courts’ of civil law systems, the following sections take a look at the specific implementations in the UK, China, and Malaysia to gain an understanding of how these technologies operate under various legal frameworks.

3.1 United Kingdom

One of the first nations with an official court system is the United Kingdom, which is also recognised for establishing the common law system, sometimes known as the English legal

system, which has been adopted by a number of other countries. The prominent application of AI in the judicial system can be seen through two software programs. To begin with, it is the Harm Assessment Risk Tool (HART), which was initially developed in the United States. The UK police have been using this software since 2017 to estimate the probability that an accused person will commit crimes in the future (Lupo, 2019). Similarly to COMPAS, this system predicts the overall status of the accused based on precedent data inserted and clarifies whether the accused has the possibility of committing a serious offence, a non-serious offence, or not at all over a two year period (Burgess, 2018). Furthermore, law enforcement agencies rely on HART outcomes to determine whether individuals should be directed to rehabilitation programmes or subjected to continued monitoring (Lupo, 2019). HART's main goals are to lower crime rates, improve police resource planning, and boost law enforcement agencies' effectiveness. For low-risk criminals, the accuracy rate of the system is 98%, whereas for high-risk offenders, it is 88%, as reported (Lupo, 2019).

Second, an application in the form of a generative AI chatbot called DoNotPay provides a platform to advise people on legal matters involving traffic-related issues with no compensation in return (Srivastava, 2023). The chatbot works by asking a series of queries to users, analysing their answers, and then making specific recommendations for future actions (Srivastava, 2023). For example, the system may suggest to users that they appeal the summons imposed or pay a traffic price. Furthermore, DoNotPay has the ability to create filled-out application forms using the data that users supply (Nhemi, 2023). The software may be downloaded for free and may stay that way in the future.

Other than the machine learning system integrations, the UK has also established a Court Modernisation Programme in 2016 to provide online platforms for various legal services such as divorce claims, probate and low-level criminal cases (HM Courts & Tribunals Service, 2018). This seven-year reform programme is managed by HM Courts & Tribunals (HMCTS) through various improvised methods involving court procedures. This includes procedural reviews without the parties' physical appearances to expedite the process (Patreliuk et al., 2024). Additionally, it also applies the digital case management system and full availability of the system for the filing process.

In June 2023, Sir Geoffrey Vos, Master of the Rolls of the Bar Council of England and Wales, addressed the future use of AI software like ELSA (Early Legal Services and Advice) and its potential for integration with legal services (Courts and Tribunals Judiciary, 2023). On December 12, 2023, the UK released guidelines on Artificial Intelligence for Judicial Office Holders in view of the expanding role that AI serves in the judicial system. These guidelines consist of ethical guidelines that must be considered by legal practitioners in using AI-related tools. This shows that Judges in the UK are now allowed to use AI to formulate their legal opinions in court (Judkins, 2023; Campbell, 2024). This progress illustrates the United Kingdom's commitment to incorporating modern technologies into its legal system while upholding moral principles.

3.2 China

The integration of Artificial Intelligence (AI) with China's legal system has resulted in remarkable transformations, particularly the establishment of the Same Type Case Reference (STCR) framework (Gulyamov et al., 2023). Despite incorporating civil law in their judicial system, the Supreme People's Courts of China (SPCC) started to integrate and practise the principle of the common law system such as following precedent cases (Finder, 2023). This is evidence from publishing cases formally in 2010 and the creation of the 'Guiding Cases' by SPCC legal system for China's mainland, in which rulings from various courts undergo revision by the SPCC before publication. Even though judges are not bound by these guiding cases (Tang, 2025), they are partly binding as illustrated through the STCR system on case guidance provisions issued in 2011, 2015 and 2020 that highlight the elements of treating similar cases alike (Huang, 2023). The STCR system gathers and examines prior cases in order to keep an eye on judge behaviour and prevent disparities in rulings (Tang, 2025). In contrast to the Guiding Cases, decisions made under the STCR are binding, and senior judges must approve any departure from precedent along with additional reasoning (Srivastava, 2023). The STCR system uses machine learning to update cases that go to trial and provide recommendations on future judgement predictions. It can be further separated into three programmes: the same type programme, prior case analysis programme, and judgement generating programme (Srivastava, 2023). This system is becoming more and more well-known for its ability to quickly and effectively handle disputes while also filling in statutory loopholes (Deng, 2019).

Subsequently is System 206. This system, formally known as Trial-centred Litigation Reform Software, is introduced to provide assistance to legal practitioners and investigators in handling criminal cases (Papagianneas & Junius, 2023). This system is prominently used in Shanghai No's 2 Intermediate People's Court since January 2019 (Cui, 2020). It provides standardised guidelines by analysing the data and keeping it in structured form, such as time and date (Srivastava, 2023). This standardisation enhances task performance, data consistency, and evidence collection, especially when it comes to identifying discrepancies in the evidence, evaluating the recommendations for sentencing, and determining the appropriate sentence severity based on prior sentencing decisions (Xu, 2022). Additionally, System 206 has advanced voice recognition skills that allow it to identify speakers based on their roles, such as prosecutors and defendants, and to transcribe speech during hearings (Wang & Tian, 2022).

Besides that, the Government of China is also running the China Judgement Online website that possesses around 130 million public cases for public reading (Wang & Tian, 2022). Although this website was established earlier than STCR, its credibility has also decreased due to selective publication, as there is an obvious decrease in cases year by year (Luo & Kellogg, 2022). AI Chatbot, the 'Ning Bo Mobile Micro Court' app, which is integrated with WeChat, further facilitates interactions between users and judges, enables tracking of case status, and provides a mechanism for lodging complaints (Shi et al., 2021). This software has processed over three million court cases and processes since it was

launched in March 2019. Through the assistance of the application, plaintiffs can complete the entire legal process online, thereby reducing judicial costs (Shi et al., 2021).

Furthermore, China also established 'smart courts' that integrate System 206 technology to provide accessibility and efficiency of courts by utilising optical character recognition, automatic speech recognition, and natural language processing to generate an automatic transcription. Several rules, like the Online Litigation Rules, Online Mediation Rules, and Online Court Operations Rules, have been issued to control the practices of smart courts (Papagiannenas & Junius, 2023). The 'wise judge' system is applied in Beijing High People's Courts that rely on cases in China Judgement online to recommend judgement for cases that have similar facts precedently (Xu, 2022).

AI-operated machines are accessible to the public to provide legal counselling, register cases and create legal documents with no restriction of time (Zhabina, 2023). A robot judge named Xiao Zhi was also used to help people in courts in Hangzhou by summarising arguments, assessing evidence and making recommendations that were subject to an actual judge's approval. A number of AI technologies, such as machine learning and facial recognition, are emphasised in the Beijing Internet Court's White Paper on Internet Technology in Judicial Practice as methods to improve court services (Xu, 2022).

In a nutshell, most AI driven systems were incorporated into China's judicial system to ensure uniformity and consistency of judgement and monitor the judge's behaviour through pre-determine algorithm.

3.3. Malaysia

The use of AI-generated software by the Sabah and Sarawak magistrate court to recommend a sentence in a drugs case brought attention to the use of AI in the Malaysian legal system. The accused in *Public Prosecutor v. Denis P. Modili* (2020)¹ was found guilty of rape in accordance with Section 376 of the Penal Code and of using dangerous drugs in violation of Sections 12(2) and 15(1) of the Dangerous Drugs Act of 1952 (Khong & Ho, 2022). Using an AI sentencing algorithm, the court recommended a 12-month prison sentence after the offender entered a guilty plea. This recommendation was carried out by the presiding judge. On appeal, however, the High Court held a lighter sentence. This artificial intelligence system examined court records from 2014 to 2019, considering elements including the accused's age, the quantity of substances used, and work details (Daud, 2022). Although the system was questioned on equality and personal liberty, the court disagreed and held that the AI was used as a mere assistant to the judge with no compulsory binding effects required. The system is further used in the current court and recommended the punishment from 12 months to 10 months (Daud, 2022). It is claimed to be fair as the accused was given the opportunity to amend his plea after being informed about the software used (Khong & Ho, 2022).

¹ *Public Prosecutor v. Denis P. Modili* [2020] 2 Sessions & Magistrates' Cases 381 (Magistrate's Court).

The *Modili* (2020) case highlights a significant gap in Malaysia's legal readiness. Although the court classified AI as a 'mere assistant' in order to avoid contradiction with current legislation, this indicates that there are no explicit legal frameworks governing algorithmic transparency. The legal system is still unprepared to defend the accused's right to challenge the evidence against them in the absence of transparent regulations, which call for the disclosure of how an algorithm evaluates certain elements. Moreover, the High Court's decision to reduce the sentence implies that even while the technology is available, the law still views AI as a recommendation rather than a trustworthy legal standard, which calls for a more precise legislative stance on who is responsible for algorithmic errors.

The application of AI into the judicial system was not a sudden move. The state government created and introduced the Artificial Intelligence in Court Sentencing (AiCOS) system in January 2020 (Khong & Ho, 2022). In addition, Tan Sri Dato Abang Iskandar bin Abang Hashim, the Chief Judge of Sabah and Sarawak, addressed the possibility that AI-integrated systems would advance beyond sentencing to other areas of the law (Sanghvi et al., 2022). In July 2021, the Office of Chief Registrar of the Federal Court of Malaysia released the sentencing guidelines for AI to be implemented in Session Court and magistrate Courts in Peninsular Malaysia (Tan, 2023).

Although the Sabah and Sarawak judiciaries' proactive approach shows a strong institutional capacity for technology adoption, it raises questions of 'human-centric' capacity. Institutional capacity is the system's ability to continue operating independently using software such as AiCOS. Judges may unconsciously follow the AI's 10-month or 12-month 'recommendation' in order to avoid the additional stress of explaining a departure from the data, which poses a psychological risk of anchoring bias. The judiciary must put into effect strict training that enables judges to view AI as a data point rather than a conclusive shortcut, maintaining that human touch remains the last deciding factor.

AI chatbots have been used for purposes other than sentencing (Mahali et al., 2022). To help with their business, the legal firm Gan Lee & Tan created an AI chatbot with IBM Watson Assistance. Shang & Co. also developed AskAILA, an AI chatbot that specialised in labour law (*Introducing AskAILA*, 2020). The objective of the system is to remove litigation costs. AskAILA, which is customised with data on Malaysian labour laws and regulations, offers Human Resources departments and companies' legal advice, example documents, and checklists. Other than that, Malaysia also has previously moved towards the digitalisation of the court system starting from the case management system such as E-filing and E-courts system. This system was recognition of the benefit resulting from technologies to expedite the court cases. Prominently, there is Court E-Filing System, Case Management System (CMS), Queue Management System (QMS) and Court Recording and Transcription System (CRT) for the judiciary department of Malaysia (Khan & Ali, 2021). Therefore, it can be observed that AI integrated systems through Chatbot especially are growing in Malaysia. As these aids are provided by law firms that aim for easy and quick answers, hence it is non-binding.

4. Overview of the Implementation

Since the use of AI in court systems like the UK, China, and Malaysia is aimed at enhancing efficiency, its consequences on judicial independence and the rule of law must be carefully considered. The 2023 guidelines underline that AI should only be used as an advising tool for opinion formulation, not as a substitute for human legal reasoning, with a focus on judicial administrator officer monitoring in the United Kingdom. By keeping systems like the Harm Assessment Risk Tool (HART) and DoNotPay as non-binding, 'advisory' platforms and restricting AI use to low-level administrative changes to prevent the core courts from algorithm biases, this approach maintains the fundamental constitutionality of these systems.

On the other hand, the binding Same Type Case Reference (STCR) framework, which guarantees that 'similar cases are treated alike' but fundamentally impacts judicial discretion by requiring judges to justify any departure from AI-suggested precedents, represents a more aggressive standardization in China's 'smart courts'. This guarantees consistency and keeps an eye on judicial conduct, but it entails the risk of creating a 'mechanical' rule of law where procedural consistency is attained at the price of empathy and human touch.

The distinction is further illustrated in Malaysia, where the system's legal readiness was examined in *Modili* (2020). The court determined that AI algorithms are a 'mere assistant' with no legally binding consequences, thus upholding the judge's independent discretion and emphasizing the continued necessity of human intervention for the constitutional protection of individual freedom. Beyond these fundamental legal frameworks, these technologies' functional specializations govern how they are actually used. Thus, the AI integrated system applied in the UK, China and Malaysia can be further divided into multiple components such as AI sentencing, AI Chatbot, AI legal search, guidelines and objectives of implementation.

In these three countries, AI generated sentencing that is applied through analysis of precedent cases into one system to provide an accurate and appropriate sentencing for specific cases. In the UK, there is yet to be any AI tools in generating sentencing for accused during trial, though they do have a system where they are sentenced for punishment and need to fill a short assessment to keep (Risk Management Assessment, 2002). This system is used by the prison and probation services in the UK to predict the possibility for the accused to commit a similar crime in the future (Prison Reform Trust, 2022). The introduction of the AiCOS system in Malaysia has opened a new pathway for AI sentencing aid for future cases. In China, AI sentencing is much more advanced, with assistance from System 206 and STCR through machine learning to collect and analyse massive amounts of cases and provide sentencing prediction.

Moreover, the AI Chatbot gained its popularity especially in China, where the system is incorporated into WeChat and provides proximity accessibility to justice. The UK and Malaysia demonstrate comparable frameworks in which AI chatbots, developed by private or external entities rather than governmental bodies, serve to enhance the efficiency of the

legal process by providing remote access to information, thereby reducing the need for physical interaction with legal institutions. Furthermore, AI for legal research is growing in the UK, China and Malaysia, where the assistance of AI is not prohibited but recognised through a few guidelines and speech by prominent legal scholars. For now, only China has established a few regulations to govern the practice of online courts. Similarly in creating the concept of ‘smart courts’, China seems to have advanced by introducing AI judges and AI assisted tools in judicial proceedings.

Lastly, it can also be observed that the difference of objective in implementation of AI into the judicial system, where in UK and Malaysia, it is more aligned with current developments and to overcome backlog of cases, but contrast in China, where it is applied to govern and monitor the judges’ behaviour (Stern et al., 2022).

5. Impact of AI Application in Judicial System

The application of AI in the judicial system has had a significant impact on the country, particularly in expediting the judicial process and increasing accessibility to justice. This is because the assistance of AI allows analysis of vast amounts of data in a very short time, going beyond human capabilities. This is especially beneficial in legal cases that require extensive reading and analysis. AI saves judges lots of time by providing support that can evaluate and present cases in an understandable manner. Not only that, lawyers also benefit as the process of filing and submission is expedited, with all relevant reports and cases compiled into a single, user-friendly software. In addition, AI also expedites legal research by limiting the number of cases to those with similar precedents or relevant laws. For instance, it reduces the amount of time court clerks spend on manual labour by 30% (Xu, 2022). Smart courts in Hainan have significantly reduced the time required to draft legal procedural documents by 90% and judgements by 70% (Srivastava, 2023). Chatbots have made it possible to settle a large number of cases in China in a short amount of time, thereby lowering the backlog and ensuring that justice is carried out as soon as possible. The introduction of online dispute resolution has also shortened the duration of legal proceedings, with some cases being settled in less than one hour (Yu & Dong, 2019). The drive for efficiency, however, implies a significant risk of ‘automated bias’, as judges may become unnecessarily dependent on algorithmic recommendations in order to avoid the administrative scrutiny required to justify departing from AI-driven criteria. The foundation of judicial independence could be challenged by such a reliance.

Moreover, AI has also caused standardisation of documents aligned with the requirements of the judicial system. It ensures all documents submitted to the court are in a standardised format by resolving any problems or issues related to documentation using AI assistance. Also, having prior assistance available for the public will give the client an overview of the legal problem faced, such as the DoNotPay app enables users to ask for advice on what to do when they receive paperwork or tickets related to traffic violations (Srivastava, 2023). The availability of applications on the popular communication platforms in China has given its citizens more flexibility and transparency in the legal process (Stern et

al., 2022). The platform provided by China keeps clients informed about their updates regarding their cases, which differs from Malaysia, where clients commonly receive their updates through their lawyers. This also helps clients to be able to bring important documents during consultation with lawyers at the end, saving the time and cost spent on the lawyers. Thus, AI is observed to have an impact by not only being able to lessen the burden of the lawyers but also being able to educate its citizens simultaneously.

However, this strict standardization of documentation and dependence on computerized legal assistance run the risk of producing a 'mechanical' judicial system that is unable to take into consideration the particulars of each case or human error in the original files. Additionally, even while these platforms provide individuals with immediate updates, they can unintentionally compromise the vital role of legal counsel, which leads to misunderstanding of complicated legislation and a possible weakening of the procedural safeguards provided by the rule of law.^r

6. AI Integrated Proposal for Malaysia Judiciary

If Malaysia wishes to further expand the integration of AI into the judicial system, it is important to consider the few principles of AI in the legal system as established under the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment (Jimenez-Gomez & Carrillo, 2022). The Charter which consists of five principles. First, the principle of respect for fundamental rights, where the primary consideration in applying AI in legal services must not violate the fundamental rights of humans. Second, the Principle of non-discrimination, where there must not be any discrimination imposed on individuals or groups of people. Third, the principle of quality and security where data used to collaborate with AI must be verified data from credible sources. Fourth, the principle of transparency, impartiality and fairness where such process data must be available to the public for audit. Lastly, fifth, the principle under user control which is to make sure a person or accused where AI driven tools were used to decide their life is being informed to them. Through these principles, it facilitates the usage of the technology, making it reliable and unbiased while maintaining transparency towards the public and simultaneously upholding the rule of law in a digital world.

The proposed implementation must strictly define AI as an advisory tool and provide assistance to the judiciary but not as a replacement for human judgement. As a result, Malaysia may reduce the possibility of 'automated bias' and make sure that technology enhances the judge's attention given to the specifics of each case rather than taking the place of the critical depth needed for complicated sentencing and legal interpretation by establishing AI as a facilitator.

A comprehensive regulation or guidelines must be established and go beyond the judiciary, including all stakeholders of justice (Palladino, 2023), such as the Bar Council and law enforcement organisation. In order to ensure that prosecutors utilize these technologies transparently and that practitioners are responsible for the reliability of AI-generated files,

these guidelines should explicitly define the scope of AI utilization (Hussain & Anwer, 2025). This cooperation is to ensure that we can make sure that AI continues to be a tool for institution empowerment that supports rather than opposes the constitutional framework.

As Malaysia already has AI-driven tools in some aspects of the judicial system, hence in proposing the suitable AI-integrated program for the judicial system in Malaysia, it will be either an improvement from the existing mechanism or a new alternative that Malaysia has the potential to adopt in the future. The discussion is further divided according to its functions.

6.1 Legal Research

Websites such as LexisNexis are already used in Malaysia to help lawyers search cases that are relevant. This article proposes that Malaysia's legal research platforms can be further improved by incorporating machine learning and natural language processing approaches to maximise their ability to search cases on plain text inserted in search box in. This would cut down on the amount of time spent searching for relevant precedents. By incorporating AI, search algorithms can be enhanced to produce more accurate and relevant results. Furthermore, legal practitioners' research would be greatly facilitated by the application of machine learning algorithms to evaluate legal texts, detect patterns, and predict case outcomes based on past data.

6.2 Drafting Papers

A software or application that provides a platform that helps with legal document preparation can save a lot of time, particularly when dealing with complicated issues like foreclosure, bankruptcy, or conveyancing that call for frequent visits to various government offices. Small mistakes cause documents to be rejected daily. The likelihood of rejection can be decreased by using an AI-driven platform to gather the required papers in a timeline or sequence. AI can help by gathering data from legal practitioners, customising the information and arranging it in the particular cases those lawyers handle. Alternatively, collaboration with government bodies may also assist by maintaining the accuracy and relevance of the information, taking into account the periodic release of new guidelines. Documents can be generated and analysed using natural language processing techniques to make sure they adhere to all legal standards and regulations.

6.3 AI Chatbot

Although several law firms have created AI chatbots specifically for their demands, the public would greatly benefit from a system provided by Malaysia's primary legal councils, such as the Bar Council or the relevant state bar councils. This would increase confidence in the legal system by providing accessible assistance. It may be implemented by AI chatbots giving basic legal inquiries for individuals to ask for free, or they could specialise in

particular areas like tax law, labour law, contract disputes, or other legal matters. In Malaysia, there are currently not enough legal aid services (*bantuan guaman*) to serve everyone, especially in rural areas (Kassim, 2023). It is also worth highlighting the possibility of legal aid services that only accept selected cases. Integration of AI can overcome reliance on unverified platforms like short videos from social media and so on. Based on the gaps identified, Malaysia has the potential to disseminate accurate and officially verified sources of law information to society by taking advantage of the progressive popularity of social media and the internet.

6.4 'Smart Courts'

A 'smart court' is portrayed as one in which cases are heard by AI judges and lawyers. It is impractical to conceive of AI judges fully replacing human judges, as human judgment remains essential in situations where empathy and nuanced understanding are required, which is an ability that AI currently lacks (Xu, 2022). Rather than taking this more complex route, AI can be used for certain services like corporate disputes and integrated into out-of-court settlement processes like mediation and arbitration. This would make sure that AI facilitates rather than substitutes human judgement, simultaneously accelerates the settlement process, and minimises the workload on the legal system.

7. Challenges

7.1 Cost

The high cost of development is one of the biggest barriers to integrating AI into the legal system. For instance, the Chinese government's investment for developing AI will reach around \$38.1 billion in 2027 (Chi, 2023). Meanwhile, the UK's court modernization programme, which was originally scheduled to take four years, has been extended forward to 2025, which makes it 7 years of reformation instead (Rose, 2024). The UK government has spent a budget of £1.3 million to digitalize the system rather than complete AI integration. This indicates that significant financial and time investments are needed for even digitalization, without full AI implementation (Committee of Public Accounts, 2023). As stated in the 2024 budget report, Malaysia has currently set aside RM20 million to construct its first AI faculty (Fam, 2023). This budget is only the start; additional expenses will be needed for software, such as costs to pay external companies in developing such software. Next, cost for the testing period, and later, the observant period. Take the construction period as an analogy, this implementation should not be taken lightly as it will be used to determine human life later. Thus, the entire expense of completely integrating AI into the legal system can potentially approach billions of ringgit, considering its rising popularity.

7.2 Who Will Bear the Liability?

Furthermore, the challenge in determining liability in cases where AI commits a mistake also must be taken into consideration. It is controversial to decide who is at fault when AI malfunctions or yields inaccurate data. Current law in Malaysia protects the utilisation of AI by Copyright law, Patent law or some protection derived from common law principles (Hossain et al., 2024). These, however are not reliable in determining who should be liable. Although AI is able to work independently, the development of such intelligence software still requires human production. Hence, having a clear position on who is responsible in monitoring the application of AI by establishing legislation on such a position would help to overcome this confusion. It is suggestive that the person who developed the AI should be recognised as the person who has primary control over the AI (Saud, 2024). Due to the fact that the judicial system is important in determining people's lives, it is important to establish unambiguous legal frameworks and norms on AI liability.

The legal framework must clearly define AI as a smart assistant rather than an independent 'maker' in order to ensure its accountability. Although AI is capable of processing large datasets, it lacks the 'judicial mind' required to weigh equity, ethics, and social values, making accountability in the legal system a non-delegable responsibility. The ability of judges to use discretion, which is a very human process of interpreting the spirit of the law rather than merely the letter, is what makes the judiciary special. This independence may be compromised if AI were allowed to take over as the 'maker' of decisions. Maintaining the 'human touch' assures that each case is handled with unique empathy and moral decision-making protections that no automated system can match.

7.3 Lack of Expertise

Another problem of making the collaboration come true is the lack of expertise in AI in Malaysia itself. As of right now, there are few extensive educational programmes or university courses that concentrate on comprehensive education on AI technologies solely. Some are being offered in tertiary education, like University of Nottingham Malaysia, which provides a course on computer science with artificial intelligence or if you search further on the internet,² there are a few courses that integrate AI knowledge but not as one comprehensive course. As a result, Malaysia might have to employ specialists from abroad, which would raise the cost even further. Malaysia's initiative in establishing the first ever AI faculty in Universiti Teknologi Malaysia (UTM) should be appreciated but waiting for students to graduate from such faculty should not be recommended as the more years it adds the more advanced the technology is which it is feared that Malaysia is unable to cope with.

² Few websites are available online that provide a compilation of a few relevant universities based on the user's interest like Studyportals and Hotcourses Abroad.

7.4 Reluctancy

Another issue is the judicial system's hesitation and reluctance to adopt AI. The legal profession has a strong history, and even with the potential advantages of modern technologies, many practitioners may still prefer traditional methods. Notably, one of the challenges faced by older generations around 60 and above in using AI is due to its approaches that are different than the approaches they usually do (Shandilya & Fan, 2024). Applying in the current context, similar challenges may occur for older generations in adapting new systems for senior legal practitioners. Not only that, the knowledge and awareness of the usage of AI also appear less towards society, which contributes to difficulty in application. Hence, it takes more than just emphasising the real-world benefits of integrating AI to get past this reluctance; necessary training and assistance must also be offered to make the shift easier for all parties.

8. Conclusion

In conclusion, the concept of AI discussed is not limited to only specific industries in the world, but it can also be applied in the judicial system. The fact that AI is a system that is trying its best to imitate the human brain shows that there is more potential to it that is yet to be discovered. Based on the discussion in the three countries above, the adoption of AI in the judicial system varies according to the existing legal framework of each country. In China, the AI tools are designed to assist judges in interpreting codified statutes, standardising procedures, and predicting case outcomes. In the UK, AI applications must navigate a legal landscape shaped by case law and precedent, often focusing on decision support, risk assessment, and case management while maintaining consistency with prior rulings. Meanwhile in Malaysia, utilisation of AI can be observed in administrative and procedural contexts, such as case labelling and workflow optimisation. Although China is applying a civil law system, Malaysia can take China as an example to observe how AI is being included in the judicial system. Malaysia should first establish a very clear position on AI to address any legal issue arising from it before producing a system that can determine the future of someone's life.

Additionally, the Federal Constitution requires that humans remain the ultimate arbiter in order to preserve the integrity of the legal system. According to the separation of powers, judicial authority must be used by a separate tribunal rather than by software. By basing responsibility on human oversight, the law reaffirms that technology should only improve court efficiency and never take the place of the crucial human discretion that ensures justice is not only carried out but also perceived to be carried out.

It is interesting to note a scenario in Episode 10 of *House* (Shore, 2005–2006), a popular medical investigation series back then. After battling to find out what disease the patient with communication disorder had, they found out the problem can be easily identified through a simple analyzation of blood using a microscope rather than the computer-generated scan. Dr. Foreman says to himself *'if a human being had actually looked at his blood,*

anywhere along the way, instead of just running tests through a computer, the parasite would have jumped right out of them'. Dr. Cameron replied with *"that's the price of the electronic age"*. Gaining so much benefit from the application of digital and AI may also cause loss to certain aspects of human touch in the judiciary that often seems petty. The recent incident in Malaysia, the failure of the E-Filing System (Yun, 2026) which compelled users to return to manual filing, corroborates this observation, illustrating that human intervention remains indispensable. Therefore, it can be concluded that notwithstanding the progress of technology, the human element will continue to play a vital role in the future.

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Ethics Approval

Ethical approval was not required for this study as it is based on doctrinal legal research involving the analysis of legislation, case law, and secondary sources, and does not involve human participants, personal data, or sensitive materials.

AI Usage Declaration

The following Artificial Intelligence (AI) tool has been used to assist in the research or editing of this article, but not to write, partly or wholly, the article: Quillbot.

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