DISSERTATION

ON

Artificial Intelligence to Ensure Proper Justice & Speedy Disposal of Judicial proceeding: An Analytical Overview in Respect of Bangladesh

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Declaration

I, Mahmudur Rahman, bearing Student ID: 2017-2-63-009, hereby declare that, this work of supervised dissertation which is titled "Artificial Intelligence to Ensure Proper Justice & Speedy Disposal of Judicial proceeding: An Analytical Overview in Respect of Bangladesh", is completed during my academic education as a requirement for my academic degree of LL.B. This dissertation is an original work of mine and has neither been published in any journal, newspaper, or article nor been submitted to any of such publications. Information from the works of others, used in this research is duly acknowledged and referred accordingly, and a list of references has also been included.

Table of Contents

Abstract

Every person is dependent on technology in one way or another in their daily life. People use science and technology to make their lives happy and prosperous. Life has been fast. Humans have conquered the seas from space using the technology of science. One such exciting invention of science is artificial intelligence. This discovery of science continues to help people in every aspect of their lives. This technology is used in every field, from household work to space research.

Similarly, Artificial Intelligence is playing a role in the development of law. Developed countries like America, Canada, and England are benefiting from using artificial intelligence in the field of law. By harnessing this artificial intelligence, we can bring about unimaginable changes in our laws. We can speed up our justice system. This research paper will focus on how we can leverage artificial intelligence in our justice system.

LIST OF ABBREVIATIONS

AI: Artificial Intelligence

BD: Bangladesh

US: United State

ADR: Alternative dispute resolution

PC: Personal computer

ID: Identity document

ADM: automated decision making

LCO: Law Commission of Ontario

CIVS: Criminal Investigation and Verification System

IMB: International Business Machines Corporation

FAQ: Frequently asked questions

ITMS: Intelligence Traffic Management System

ACTS: Adaptive Traffic Control System

DCC: Dhaka City Corporation

DMP: Dhaka Metropolitan

CIA: Central Intelligence Agency

CAM: Computer Aided Manufacturing

Chapter-1: Artificial Intelligence

What is Artificial Intelligence?

Artificial intelligence is a software technology or computer-controlled robot's capabilities that typically require human intelligence and judgment to create. Artificial intelligence refers to human intelligence simulation programs that think like humans and mimic their actions.[1] When a computer is made like a human brain, it means that it can think like a human and do something intelligently, then that computer is called artificial intelligence. That is when we set a computer program in a machine that can work as fast and perfectly as humans or even faster than humans. The Oxford Dictionary defines Artificial Intelligence as "the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages."[2]

The scientific definition of Artificial Intelligence: "The ability of a computer or other machine to perform actions thought to require intelligence. Among these actions are logical deduction and inference, creativity, the ability to make decisions based on experience or insufficient or conflicting information, and the ability to understand spoken language."[3] Even

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[1] Josh keran 'what is AI' (Clio, 12 May 2021) < https://www.clio.com/blog/lawyer-ai> accessed 17 October 2022
[2] The Law Dictionary 'Meaning of AI' <https://thelawdictionary.org/artificial-intelligence/> Featuring Black's Law Dictionary, (2nd Ed.) accessed 17 October 2022
[3] The Law Dictionary 'Disclaimer' Featuring Black's Law Dictionary, (2nd Ed. 2017)

the most sophisticated insect behavior is seldom considered an indication of intelligence, yet anything but the most primitive human behavior is. What makes the difference? Consider the Sphex ichneumonids, a species of burrowing wasp. The female wasp first sets her food on the threshold of her burrow before checking inside for intruders. If everything is okay, she then brings her food inside. The wasp will repeat the same activity every time the food is relocated if the food is moved within a few inches of the burrow entrance while she is inside. This is the genuine essence of her inherent behavior. Sphex clearly lacks intelligence, which intelligence must consist of.[4]

Types of Artificial Intelligence:

Artificial growth is divided into the following categories based on functionality. Reactive Machines One of the oldest types of artificial intelligence is reactive machines. Such artificial intelligence systems don't retain memories or past experiences for future use. These devices merely pay attention to the present and take the best feasible action in response to it. IBM's Deep Blue System and Google's AlphaGo are examples of reactive machines.[5] Limited Memory: Machines with a small amount of memory can temporarily store data or memories. The data is only accessible to these machines for a finite period of time. Self-driving cars are examples of limited memory systems. It can save data for road navigation, such as the most recent speed of neighboring vehicles, their distance from one another, the posted speed limit, etc.

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[4] Law council 'Scientific definition of AI' (March 2022)
<https://www.law.cornell.edu/wex/artificial_intelligence_ai > accessed 17 October 2022

[5] Rex Martinez 'types of AI' (2019)
< https://scholars.law.unlv.edu/cgi/viewcontent.cgi?article=1799&context=nlj> accessed 17 October 2022

Chapter-2: Artificial intelligence in law

What is artificial intelligence in law?

Similar to e-discovery software, legal professionals can quickly scan and explore huge databases containing rules, legislation, practice areas, jurisdictions, case laws, and more using artificial intelligence-powered legal research software.[6] Software for legal research enables data collection and aids in precedent understanding for attorneys.

How Artificial Intelligence helps in Law: Today, 22nd November 2022, there was a game between my favorite team in FIFA football world cup Argentina vs Saudi Arabia. In the first half of the game, Argentina sent the ball into Saudi Arabia's net 4 times. One of which was a penalty and one of the remaining 3 goals was deemed offside by the on-field referee. The remaining two goals were seemingly justified by the referee and the crowd. But artificial intelligence, which was used for the first time in this World Cup, stood in the way. The other two goals were also found to be offside, according to careful analysis by artificial intelligence. As a result, Argentina's two goals were disallowed. And the result is known to all. Saudi Arabia won that match 2-1. But without the use of this technology, the results could have been different. Maybe Argentina would have won the match. And as a qualified team, Saudi Arabia would have been deprived of victory. But thanks to artificial intelligence, the deserving team has realized their victory. That is Artificial Intelligence and its power.

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[6] Thomson Reuters 'Meaning of AI for the legal industry' (2021) <https://legal.thomsonreuters.com/en/insights/articles/meaning-of-ai-for-the-legal-industry> accessed 22 October 2022

Just think, if this technology is used in every field even in law. How fine will the justice system be? Even an innocent person should be wrongly punished? Any helpless person will be deprived of justice? Or will a guilty person escape punishment by resorting to lies?

Artificial intelligence is currently being used in the judicial system of different countries of the world including the United States, and Malaysia, to make some judicial decisions the court. The rapid development and incremental advancements in big data, algorithms and machine learning have accelerated the use of AI technology in the courts. AI algorithms are mainly used in the criminal justice system for determining probation, bail, sentencing, and determining criminality. Such mechanisms are also called offender risk assessment algorithms or evidence-based approaches. There are some arguments for choosing technologies that rely on artificial intelligence.[7] For example, removing inherent biases and hidden biases in the judge's reasoning, perception and decisions will increase criminal court proceedings' acceptability and scientific competence. Since computers are not humans, computers or machines do not have the same problems that humans have. The debate over whether technology is a blessing or a curse is an old one, but a new global debate has emerged over the impact of using artificial intelligence in critical arenas like the courts. Applying artificial intelligence to questions such as whether the offender can be released on parole or probation, whether the accused is likely to re-offend on bail, whether the bailee will appear in regular court hearings, and the length of the sentence for a proven offense. An artificial intelligence-driven risk assessment algorithm automatically alerts the court in these cases.

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[7] Harsh Jain 'Role of AI in law' (21 March 2021) <https://www.ipleaders.in/role-of-artificial-intelligence-in-law/> accessed 22 October 2022

Chapter-3: Artificial intelligence in the modern world legal system

Due diligence reviews: In the event that you have at any point been associated with a reasonable level of investment survey for a corporate exchange you realize that it normally includes a lot of legal counselors going through reports in printed version or in an e-room searching for suit issues, key agreement provisos, for example, change of control, task, end, and so on. Corporate administration, licensed innovation, and so on. For the most part, it takes many hands, normally outside counsel and numerous hours/days to finish. There are currently apparatuses that can robotize this interaction utilizing AI, including tracking down unambiguous legitimate ideas and creating composing reports about what was found.[8]

Prepare contracts: The preparation of an agreement as a record describing the commitments of the exchange's counterparties and its assessment for consistency with the requirements of current legislation and potential hazards for the future are aided by the planning of agreements and their legal research. legal counselors who draft contracts is the capacity to make and utilize a structure understanding. For example, one that has standard agreements and requires restricted changes. Structured contracts are enormously efficient devices and permit the organization to have a steady arrangement of arrangements.[9]

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[8] Jason Saltzman (September 2, 2022), 'Due diligence reviews', <https://www.dentons.com/en/insights/articles/2022/august/31/practical-considerations-of-using-ai-in-due-diligence> accessed 13 March 2021

[9] Agnes Juhasz 'The Applicability of Artificial Intelligence in Contractual Relationships' 'Prepare contract by AI' (December 2020) <https://blog.ipleaders.in/role-of-artificial-intelligence-in-law/> accessed 26 October 2022

There is computer based Artificial intelligence tools that can create contracts using any set of restrictions that the legal division deems important. The legal department can decide how much time it needs to spend on the development cycle. As, a quick review of all agreements produced from the framework, possibly look at agreements of a particular type, or on the other hand, if the client requires something out of the ordinary.[10]

Contract management: AI-driven programming makes risk analysis, risk assessment, and hazard risk mitigation easy and effective. Contract By enabling users to fully utilize the elements and functionality made available to them by their agreement with the board programming, the executives AI energizes hearty gambling relief. An agreement stockpile and the board structure, where agreements can be stored and then monitored based on the specifics of the understanding, are real pains in the necks of all in-house lawyers.[11]

Analysis of legal operations: While some internal legal departments still utilize paper requests, most are switching to electronic payment systems. Sadly, many in-house legal counselors struggle to separate the data in a way that is helpful, despite the fact that the e-charging framework contains a wealth of information. With the help of AI, this problem is resolved. Additionally, there are tools for activities that can provide you with reports and dashboards that show what kind of work is entering legitimately, who is handling it, how long

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[10] Agnes Juhasz 'The Applicability of Artificial Intelligence in Contractual Relationships' 'Prepare contract by AI' (December 2020) <https://blog.ipleaders.in/role-of-artificial-intelligence-in-law/> accessed 26 October 2022
[11] Samata Lwis 'AI-Based Contract Management' (26 August 2022)
< https://www.lexology.com/library/detail.aspx?g=63c1c862-29c9-4e4a-b814-a2f0b9d3568b /> accessed 27 October 2022

it will take, and what the risk profile of that work is. Additionally, it can assign the task to the appropriate legal advisers and provide the case's executives with the necessary tools.[12]

Wrong doing detection: You might recall the 2002 Tom Journey film called "Minority Report."[13] Mr. Voyage played an individual from the Precrime police, a gathering that halted violations before they happened in light of the fact that they approached data that let them know the wrongdoings were going to occur. Without a doubt, the information was provided by three clairvoyant freaks drifting in a milk shower, but for the purposes of our conversation, I'll ignore that fact. With the help of artificial intelligence, the organization is able to identify payoffs, misrepresentations, consistency problems, and even probable cases based on the content of its own records and data. AI is capable of summarizing conversations and the ideas considered, identifying the use of code words, noting the repetition of exchanges, and even identifying the speaker's mindset.[14]

Litigation analysis: There is an astonishing measure of information in the U.S. court framework's freely available reports. Assessments and orders of courts, jury decisions, and other important data is by and large completely available. Wouldn't it be ideal to have the ability to review such data and be prepared to predict the outcome of a prosecution? In fact, this is not at all surprising; AI is already responding. Soon, it will be possible to compare the facts of your case with those of other cases that the court has previously selected in order to obtain a sense of how your case will proceed. What are our prospects of winning the lawsuit? is a frequent

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[12] McKinsey (15 June 2020) 'AI on legal operation' <https://aavenir.com/ai-enabled-contract-analysis-for-legal-operations-contract-management-how-to-get-it-right> accessed 30 October 2022

[13] Minority report, 'future legal service by AI' (25 January 2019) < https://ally-law.com/minority-report-the-future-of-legal-services-and-ai/> accessed 30 October 2022

[14] Lyle Solomos, 'Wrong doing detection by AI' (6 April 2022) <https://venturebeat.com/datadecisionmakers/the-advantages-and-disadvantages-of-ai-in-law-firms/> accessed 30 October 2022

question the in-house legal counsel field? A device like that could provide some actually vital investigation underneath what is frequently a stomach called.[15]

Legal research: Legitimate examination is another application. In-house legal advisors typically either cheat the examination cycle because they would rather not expend the time or money to make a strong showing or they hire a law firm to have a first- or second-year attorney muddle through the test. With AI, you will be able to ask reasonable questions in plain English and receive an answer that includes reviewing rules, precedent, and other sources. From there, the possibilities are endless. The key point is that, in addition to potentially saving time and money, the use of AI also gives in-house counsel the one luxury that is reportedly lacking every single day: the luxury of the time to reflect on the situation and provide the greatest legal judgment and examination.[16]

Improvement of Justice Access: Artificial Intelligence and AI tools have the unique ability to lower barriers to equity, most notably the high cost of accessing legal advice. Lawyers can minimize costs and expectations for their clients by spending less time on tedious and regular legal tasks. For instance, if they believe that an examination that previously took 20 hours to complete will now only take two, they can provide their clients access to those reserve funds. Lawyers also can assist more clients by using the considerable time spent on legal research.[17]

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[15] Chay Brooks 'Litigation analysis by AI' (December 2019) <https://www.researchgate.net/publication/338163462_Artificial_intelligence_in_the_legal_sector_pressures_and_challenges_of_transformation> accessed 1 November 2022

[16] Chay Brooks 'Legal research by AI' (December 2019) <https://www.researchgate.net/publication/338163462_Artificial_intelligence_in_the_legal_sector_pressures_and_challenges_of_transformation> accessed 1 November 2022

[17] Drew Simshaw 'Access to A.I. Justice: Avoiding an Inequitable Two-Tiered System of Legal Services' (12 May 2022) < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4090984>

Chapter-4: How Artificial Intelligence helps law enforcement in foreign countries

Canada & America: The enormous increase in the usage of these technologies by governments and public entities around the world served as the project's impetus. Decisions affecting individual liberties, government benefits, regulatory compliance, and access to crucial government services are increasingly being made using AI and ADM systems. These and other challenges present fresh, complicated questions about a Canadian law change that have not yet been addressed. In criminal justice systems all throughout the world, AI and algorithms are increasingly being utilized to support police and court decision-making.[18]

The Rise and Fall of Algorithms in the American Justice System: Lessons for Canada was released by the LCO in October 2020. The employment of AI and algorithmic decision-making tools in bail and sentencing processes are examined in this Issue Paper. The study offers significant understandings and lessons on the application of AI and ADM in criminal justice to Canadians. This essay discusses topics including algorithmic accountability, scoring, scoring prejudice, measurements of fairness, best practices, and public participation. You may find this report and more details about this problem on their server.

The Directing AI: Basic Issues and Decisions paper from the LCO is a significant analysis of how to manage the automated navigation and artificial intelligence frameworks used by legislators and other public entities. States all around the world are increasingly relying on AI and automated direction (ADM) frameworks to select candidates for public office, prioritize open services, plan for policing, and assist decisions about bail and sentencing. [19]

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[18] Lco Report by Law commission of ONTARIO (Published December 2020) 'AI in law of Canada'
[19] Lco Report by Law commission of ONTARIO (Published December 2020) 'AI in law of Canada'

In June 2022, Canada delivered the "Digital Charter Implementation Act, 2022"[20] to the House of Commons. It includes three pieces of legislation that are intended to strengthen Canada's data privacy framework and ensure the progress of AI in an ethical manner.

The current protected innovation frameworks in place across the globe were not designed with AI in mind. While no one country has a comprehensive legal framework controlling the intersection of copyright protection and AI, the current approach being adopted by various purviews appears, by all appearances, to be to tackle the origin problem in AI-made deals on a case-by-case basis. The US copyright office has reaffirmed its stance on the matter, stating that human invention is a requirement for granting copyright ownership in the US. This strategy is based on the ruling in "Feist Publications v. Rural Telephone Service Company"[21], which said that copyright law only protects works of scholarship that are grounded in the mental faculties of creativity.

India: From typewriters to computers, from using libraries just for legal research to using websites to find important case laws, from fix machines to messaging, every advancement in the field of law has been progressive. The second time artificial intelligence has entered a respectable profession is right now.[22] Even though the legal services market is one of the largest in the world, it is also widely acknowledged that its operations are under digitized.[23] The legitimate calling is really conventional in its approach and hesitant to adopt new technologies. This is the perfect time for us to acknowledge how computerized thinking may alter how Indian law is now practiced and how it is viewed internationally. Equity innovation is applicable in the sense that it promotes efficiency, frankness, and impartiality in open government, as stated.

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[20] Part-3, section, 41 of Digital Charter Implementation Act, 2022
[21] Case *Feist Publications v. Rural Telephone Service Company* [1991] 499 US 340
[22] Article by Deepa Bajaj 'impact of artificial intelligence on Indian legal system' (published 1 October 2022) <https://primelegal.in/2022/10/01/impact-of-artificial-intelligence-on-indian-legal> accessed 8 November 2022
[23] Article by Mirza Aslam Beg (Published 9 April 2021) 'impact of AI in Indian legal service' <https://www.legalserviceindia.com/legal/article-631-impact-of-artificial-intelligence-on-indian-legal-system.html> accessed 8 November 2022

A decision-making tool that uses artificial intelligence is available to decide whether to review or evaluate the work, the cycle, and the decisions. Giving commoners longer-term, more significant access to equity is the primary goal.

The Indian Copyright Act, 1957 defines creator as "the individual who frames the work" for any aesthetic, emotional, musical, or fashionable work that is computer produced. Section 2(d)[24] is a perfect example of the Copyright Act's authors' unwavering belief that the security of the copyright must be held by particular individuals. In "Camlin Pvt. Ltd. Vs National Pencil Industries", where the maker of a precisely replicated printed container couldn't be identified and the Courts reasoned that it was anything but a subject of copyright, the Delhi High Court explained the relevance of the term "creator." Regarding who may assert origin of an AI-produced work that was created without the involvement of humans, the specifics of India's Copyright Act are still ambiguous.

The idea of the Indian lawful calling is with the end goal that the whole technique is done physically since the legitimate area is as yet accepted to be work escalated. As a result, computer-based intelligence is still in its infancy, with many more seasoned supporters agreeing that innovation should not be used widely since it may eventually seize power over man, avoiding the prospect of simulated intelligence in regulation. Nevertheless, there are a lot of knowledgeable attorneys and sizable law firms who are utilizing technological advancements to their advantage. The Chief Justice of India believes that integrating Artificial Intelligence innovation into the lawful and legal frameworks will be useful. On the off chance that it is executed with a suitable authoritative structure determining standards and guidelines, it will significantly help the Indian legal framework.[25]

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[24] Section 2(d) of The Indian Copyright Act, 1957
[25] Chief Justice of India "use AI in modern Law" blog post published (29 November 2021) <https://www.livemint.com/news/india/cji-s-a-bobde-welcomes-ai-system-to-assist-judges-in-legal-research > accessed 13 November 2022

Chapter-5: How can Artificial Intelligence help in the law field in

Bangladesh

Assessing the Claim of the Parties: As all the documents related to the land title are digitally recorded in the server of the concerned ministry, Artificial Intelligence can do a primary assessment, regarding the claim of the parties over the subject matter of a civil suit, where the subject matter of the suit is an immovable property. Also, the problem of information insurance, which has typically been represented by the contractual relationship between parties, can be solved using the Contract Act 1872.[26] Contracts describing the parties connection in terms of private information, sensitive personal information, information that cannot be brought into or out of Bangladesh, and how the equivalent is handled, are permitted. Specially section 10, 22 and 23 of Contract Act 1872, where identify the void and mistake of parties clearly identify by AI.

Primary Assessment of the Criminal Records of the Accused: Effective data theft prevention can be achieved using the section 507 of Penal Code 1860 Criminal intimidation by an anonymous communication. Theft, criminal breach of trust, and misuse of property are all punishable under the Penal Code by imprisonment and a fine. Computer databases may be protected by the Penal Code due of their portability.[27] As all the criminal records of the accused are now digitally recorded in the server of the Ministry of Home Affairs, and very soon digital recording procedure will be commenced in the server of the Judiciary, previous records of criminal offense and convictions can be primarily assessed and summarized by Artificial

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[26] Section 10, 22 and 23 of Contract Act, 1872
[27] Section 507 of Penal Code, 1860

Intelligence. In addition to that veracity of the Complaints can also be assessed by Artificial Intelligence based on digital records of cases filed by the Complainant as well as criminal records against the complainant.

Artificial Intelligence in Court: Every court in the country can be digitized through artificial intelligence. In this case, before presenting each case, lawyers and learned judges can easily identify proper jurisdiction before judgment. You can follow the proper forum. Also, all other data about the current case and previous related judgments will come automatically. And all will be instantly recorded in a survey. All the laws and sections of the law relevant to the case will come in after the facts of the case are recorded. and unnecessarily added clauses and references will be automatically deleted. Also, digital robotics intelligence can be used to determine whether witnesses are giving truthful statements. This is just a fantasy, though. But I think that this technology will be used in different countries in the near future. Already, police agencies and intelligence agencies in various countries are using this technology.

By how artificial intelligence can play a role in the speedy disposal of cases: Every case in our country is slow due to the negligence of various parties. Learned lawyers make timely applications. And judges can't immediately look at previously assigned case dates before assigning the next hearing date. In this case, a server can be created using artificial intelligence. Where each court and each bench will have a separate server. The scheduled date will be given serially, and after entering the date in the computer, a list of each hearing given on that date will appear. Besides, all the appearances of the lawyers in the said case will be recorded. There will be a system of attendance so that no lawyer is unnecessarily absent and prolonging the time of the case.

The bench clerk, peon, clerk, or any other third person cannot take bribes from the parties in the case, serial to the case. And using artificial intelligence in cases where you can't take separate benefits for documents. Serialization of cases will be done online and all documents will be uploaded in the bench survey. And concerned lawyers can download documents from that survey anytime using their ID.

Mediation Process and ADR: At present, the number of cases in our courts is increasing unimaginably due to people losing confidence in the Mediation Process and ADR. The main reason for this is that the mediation process and ADRs are done in a biased manner. This bias can play the biggest role in preventing attitudes Artificial Intelligence. Although humans are biased, machines can never be biased. In this case robotics intelligence can be used. By doing this people will have confidence in Mediation and the pressure on the Court will be reduced to a great extent. As there are few productive cases, the proceedings will be conducted quickly.

Artificial Intelligence in Police Stations: Artificial intelligence can play the biggest role in the management of the country's police stations. I am not saying that the police should be replaced by robots. But think: if in every police station, the police were monitored by robots, what could be the result? After the arrest of the accused or any person, it will immediately come under a police station survey. It's time to catch him. Whether the challan has been made to the court within 24 hours of confirmation of the correct identity of the arrested person using biometric methods. Whether there is any kind of physical torture on the arrested person. Whether habeas corpus has been violated or the duty officer is receiving any special benefits

from him. It is needless to say how important a role artificial intelligence can play in overseeing these issues.

Artificial Intelligence in Prison Surveillance: We often hear that the criminal is on the loose and that his sentence is being served by another person. In this case, if every prison is brought under the purview of artificial intelligence, the benefits can be reaped. After sending an accused from the court to jail, his identity verification and biometric verification will be done. He will then be admitted to prison. Biometric verification of inmates will be done periodically using robotics technology. Whether the said criminals are inside the jail or whether someone else has entered Even prisons can be supervised by artificial intelligence to control the smuggling of drugs or any kind of immoral activity.

Artificial intelligence to prevent smuggling and criminals from leaving the country: Every year, notorious drug traffickers smuggle huge quantities of narcotics and illegal weapons across the border into Bangladesh. Also, the person responsible after the commission of the crime. Or some convicts who are released on bail under a "ban on leaving the country" often leave the country and stay abroad. Artificial intelligence can play an important role in stopping these criminals. Those who are granted bail under different conditions from the court or those whose names are on the police's suspect list. One of their data sets will be sent to all international airports and land and water ports in the country. And it will be linked to the immigration matrix. By doing this, when they want to leave the country through that port, it will come to the attention of the concerned officials. Once the identity of the offender is confirmed, it will immediately come in the form of a notification to the police station, submitting the data so that

the officials on duty at the port cannot assist the criminals and destroy the data. In the same way, notifications of drug smuggling will be submitted to the Narcotics Control Directorate. I think it is possible to reduce the crime rate in the border areas using this method.

By how Artificial Intelligence can helps lawyers: The legal industry has experienced a major rise in competitiveness in recent years. For legal companies, it has become essential to comprehend technological advancements and customer needs. Those that ignore these changes will lose relevance within the next few years. From what we currently observe, future legal firms would seem significantly different. Look at some of the characteristics that advanced legal companies would have.

Improve the service of clients: The way clients are treated and served in the future will essentially alter. Law companies would approach their clients with fresh ideas and more financially astute and legitimate legal solutions. However, this billing method will eventually be obsolete. At the moment, legal firms in India bill their clients according to the billable hour technique. Law firms should think about revising their evaluation procedures and using an Exhibition Based Estimating Technique in order to better serve their clients: As the name infers, this cost plan is client-accommodating, as clients might be charged once they meet their objectives and the same would fortify the expert relations between the clients and Law Firms.[28]

High profits and save time: Artificial intelligence helps lawyers with more routine tasks, but it also helps with important decisions about clients and cases. AI can help lawyers organize

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[28] Notarize blog "AI helps lawyers" blog post, (published 7 February 2022) < https://www.notarize.com/blog/how-artificial-intelligence-helps-lawyers-and-theirclients.> accessed 22 November 2022

knowledge so that it is easier to find and use individual pieces.[29] Additionally, it can quickly

pinpoint specific emphasis points in lengthy reports, which is a huge time-saving feature for

lawyers and paralegals. Nowadays, law firms are concerned about increasing pay. If we look

closely, we can observe that while opposition among law firms has continually increased,

interest in legal services has remained flat, making income development extremely difficult.

Law firms will focus less on money in the future and more on greater advantages and benefits.

Foundation of growth by AI: The introduction of new Artificial Intelligence based

arrangements aimed at making the legal system more efficient and clients friendly has recently

undergone an astonishing expansion. Robotic contract writing and E-Revelation tools are only

two examples of genuine digital startups that have emerged to improve the lives of lawyers and

law firms.[30] Artificial Intelligence based legal systems aid legal organizations in being more

productive, reducing costs, and increasing revenues. These innovations will be combined by

the future law firm, which will also collaborate with other organizations to promote Artificial

Intelligence based agreements that will benefit the legal industry.

Judicial data migration and saving data with artificial intelligence: With the help of AI,

data storage of various cases is easier and less risky than paper documents. Relocating

information physically is time-consuming, expensive, and dangerous. There is a significant

recovery period and a high likelihood of errors without any assurance of accuracy.

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[29] Managed source by MOS 'AI to help lawyers and clients' (3 November 2022) <https://www.managedoutsource.com/blog/how-artificial-intelligence-helps-lawyers-and-their-clients> accessed 23 November 2022

[30] Stanley Greenstein *Preserving the rule of law in the era of AI* 'Foundation of growth by AI' (17 July 2021) <https://link.springer.com/article/10.1007/s10506-021-09294-4> accessed 23 November 2022

Additionally, you can incur large costs for information gathering and verification, and you should try placing another order for each new set of pertinent data.

The ability to mass imports your agreement information base is made possible by AI. The idea is to have the ability to handle a file of contracts that attorneys can only manage with their limited time and energy. In terms of consistently obtaining the organization's resources, this is a huge step forward, and AI-integrated programming can accomplish this right away. AI innovation makes information relocation easy. With programmed information relocation, you can ensure information precision, have full command over ordering time with a mass examination, wipe out import costs and have an improved result. Basically, with AI-helped information movement, you can manage the whole agreement and the executive's actions and improve the data of interest without any interference.

AI on Digital Security Act & Telecommunications Act: The Digital Security Act, 2018[31] was passed to guarantee the security of public, Government and public information which is related section 8. The main reason for this Act is, in the event that any information or data distributed or engendered in digital media about a subject under the Director General ensures compromises information security, the Director General might demand that the pertinent administrative power eliminate or obstruct said information or data as proper. Which will control properly and accurately by AI. Moreover section 10 of this act, Digital forensic lab is controlled by AI.

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[31] Section 8 and 10 of Digital Security Act, 2018

A telecommunications system, as well as any arrangements required to operate it in the public interest, may be seized by the government under Sections 96 and 97 of the Telecommunications Act, 2001.[32] The owner or person in charge of the radio apparatus or telecommunications system that the government seizes must be compensated if the government uses AI in this area.

Copyright Act and AI: Deep fake cannot be prevented by copyright alone. because the proprietors of these pictures and videos are not the victims. Certain actions that do not violate copyright are outlined in Section 72 of the Bangladesh Copyright Act,2000.[33] The list is quite long. Unfortunately, the person who created the deeply phony movie or photographs is protected by copyright. The copyright does not protect victims. No legal action may be taken by the victim against the person who made the phony video and photographs. It is obvious from this that employing Copyright Law to bring legal action against the offender is quite challenging. But AI can handle this problem, finding the copyright and identifying the inventor with ease.

AI to control Traffic Rules & Road Transport Act: Artificial intelligence can play an important role in enforcing traffic laws. For example, India uses two types of technology (artificial intelligence software) to enforce traffic laws. One of which is ITMS and the other is ACTS. Artificial intelligence is currently used to protect our Padma Bridge.

ITMS: ITMS (Intelligent Traffic Management System) is an application powered by Artificial Intelligence and equipped with cameras installed at traffic crossings. As of right now, we are

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[32] Telecommunications Act, 2001
[33] Section 72 of Bangladesh Copyright Act, 2000

fully aware of this. They aid in identifying and differentiating automobiles that disobey traffic regulations and continuously alerting the police.[34] Currently, ITMS will also automatically punish the responsible parties in accordance with the law and slap e-challans on the violators. Each e-challan will provide previews and recordings of the associated documentation.

ACTS: Adaptive Traffic Control System (ATCS). Traffic conditions are constantly changing, and ATCS will continuously alter traffic signal cycles based on information obtained from ITMS cameras. There is some setup here. When fully operational, ATCS will reduce traffic light wait times by almost half. Additionally, it will help the city work with experts to understand the ground conditions and traffic patterns throughout the city, supporting them with a wide range of services from setting up flyovers to dispatching more staff to trouble spots.[35]

Advantages of using these technologies: The engineers of our country have developed an app currently 'Digital Driver'.[36] Assisted driving is developed using artificial intelligence technology. The Digital Driver app has two different interfaces for motorcycles, cars, buses, and trucks. And it has to be selected while starting the app. Different features are added as needed in both interfaces. Congestion relief and traffic law enforcement are largely possible using this app. If we look at developed countries like America, and England, we can see these types of Artificial intelligence dependent systems.

In 2012, the use of artificial intelligence to control the traffic system was started experimentally in a part of the city of Pittsburgh, Pennsylvania, USA. It was entrusted to a group of researchers

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[34] Pavleen Singh Bali 'Intelligent Traffic Monitoring System' (march 2017) <https://www.researchgate.net/publication/306033057_Intelligent_Traffic_Monitoring_System_ITMS> accessed 28 November 2022

[35] ACTS system on traffic, web report (4 June 2021) <https://www.efftronics.com/adaptive-traffic-control-system> accessed 30 November 2022

[36] Digital driving system, Newspaper: *The Roar Media* (29 December 2018) <https://roar.media/bangla/main/tech/the-future-of-traffic-management-artificial-intelligence-to-eradicate-traffic-jam > accessed 30 November 2022

from Carnegie Mellon University. Researchers have successfully demonstrated the use of artificial intelligence in traffic control. They named their technology 'Surtrac' has greatly reduced traffic congestion in Pittsburgh.[37] According to their website, artificial intelligence-controlled traffic zones now take 25% less time to reach destinations than before, the rate of vehicles stuck at traffic signals is reduced by 40%, vehicles don't have to stop at signals as often as before, and noxious fumes are emitted from vehicles. The amount was reduced by 20%.

In Milton Keynes, England, a government-sponsored private technology company called 'Vivacity Labs'[38] has launched the use of artificial intelligence to reduce traffic congestion. By monitoring the traffic system with the help of 411 cameras across the city, this artificial intelligence can predict traffic jams about 15 minutes in advance with about 89 percent accuracy. As a result, it is possible to prevent traffic jams easily.

Dakshin City Mayor Sheikh Fazle Noor Tapas said earlier, "Traffic in Dhaka city will no longer run by hand signals. We have taken initiatives to modernize traffic signals at 53 intersections."[39] I personally welcome his initiative in using Artificial Intelligence.

How can AI help Bangladesh Police to predict & prevent crime: Dhaka Metropolitan Police Commissioner Md. Shafiqul Islam said a few days ago, "The state-of-the-art lab set up in the detective police office will be inaugurated next Monday. This lab will play an important role in technology-based crime control. Much information about criminals will be input there. If

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[37] Web report of '*Surtac' system on traffic*, (23 October 2018) <https://www.rapidflowtech.com/surtrac> accessed 4 December 2022
[38] Vivacity Labs Online report (March 2021) <https://vivacitylabs.com/> accessed 4 December 2022
[39] DCC Mayor Sheikh Fazle Noor Tapas on AI, Newspaper: *The Banglatribune* (18 June 2022) <https://www.banglatribune.com/others/> accessed 4 December 2022

someone commits a crime, he can be identified very easily with artificial intelligence."[40] I applaud his opinion.

Multiple cells in CIA labs in separate branches are used for speedy crime investigation and identification of criminals, the storage of crime and criminal-related information, organized crime, cybercrime and financial crime detection, and cyberspace monitoring and surveillance. These services will be connected to a specific database, which will help all the police stations across the country, including Dhaka, monitor various crimes, types of crimes, and the movement of criminals, and identify and arrest criminals. Apart from this, digital profiles of arrested criminals and suspects will be created and stored. For this, the Criminal Investigation and Verification System (CIVS) will be introduced through an upgrade with modern technology, crime classification, and artificial intelligence in addition to the present Suspect Identification and Verification System, which has already been piloted in various parts of the country. In this continuation of digitalization, there will be a one-stop service platform to get all the information of suspected arrested criminals instantly with one click to control and prevent crime. Through this, it will be possible to easily get information about the criminal's previous criminal activities and his residence. Apart from that, police verification, identification of unidentified bodies, and other information can also be obtained through this software.

The use of current artificial intelligence initiatives is proving to be of enormous use as the rate of crime increases. These initiatives aid in a greater degree of crime and misbehavior anticipation. In any event, it is equally important to check that the operational design is logical and transparent. Many experts believe that in order to regulate the use of AI, a global board of

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[40] News Report, *The Amader Somoy* (25 February 2022) <https://www.dainikamadershomoy.com/post/363475> accessed 7 December 2022

trustees should be established. Every country is expected to help improve this AI platform in some way. The preservation of fundamental freedoms is a further concern. It is becoming increasingly obvious that artificial intelligence will be needed to assist law guardians. It'll be typical. It will be normal practice yet it should be verified that the regulations and different codes don't attack the honor of humans.

Chapter-6: Findings, Recommendations and Concluding Remarks

Findings of the Research: When we look at Bangladesh, artificial intelligence in law is still in its infancy. Police and lawyers are hesitant to adopt this technology. because they believe it will have a negative impact on employment. Moreover, they are not proficient enough in the use of technology.

In this regard, neither the government nor the relevant law ministry are taking any effective digitalization measures. As a result, we are constantly falling behind compared to other countries. Due to the pressure of cases, the judicial system is slowing down. Corruption is increasing. Since the court cannot impose a speedy trial, a victim cannot expect a speedy remedy. The courts follow standard procedures in civil and criminal proceedings and request written reports. As a result, the patient has to wait for a long time for remedial action. But other countries are already benefiting from the use of this technology in just a few days.

Algorithms are fed into computer systems to be applied by the machine in machine learning. The fact that obsolete technology and machines are being used, the data is frequently inadequate, and the machine won't be able to operate effectively until a sizable amount of

trustworthy data is provided to it are some of the main obstacles to implementing AI technology in Bangladesh.

Recommendation and Concluding Remarks: Abdul Malek, Honorable Assistant Judge of Rajshahi, recently published in the journal "AI & Ethics." which has been published in the famous "Springer Nature" journal. He says, "The use of artificial intelligence in criminal courts creates the risk of discrimination and bias."[41] He has completed an interdisciplinary research project on this topic combining law and justice, technology policy, and ethics.

With full respect to sir's research, I want to say that technology is something that is used for the welfare of people, by people. In other words, people, the way they use this technology, will also get its results. Now it is a matter of seeing how people are using technology.

100 years ago, people used animal-driven, ox or horse carts. Currently using technology-based engine-driven vehicles. By doing this, huge distances are covered in a few hours. People have taken their time, and the journey has been comfortable. The risk of accidents remains with the use of mechanical vehicles. But it largely depends on the people. on how people are controlling the car.

The prognosis for the legal sector has clearly changed as a result of technological advancements, and it can be said that using AI in the legal sector offers many advantages. It has helped legal professionals conduct quick research; it can support judges' decision-making processes with its predictive technology; it is useful for law firm's due diligence work, data

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[41] 'AI on Law' by Abdul Malek, Newspaper: *The Ittefaq* (16 May 2022) < https://www.ittefaq.com.bd/597271/> accessed 16 December 2022

collection, and other tasks, all of which increase the effectiveness of their work; and it has helped legal professionals conduct quick research.

This technology is quite expensive. However, the amount of corruption and time saved by using this technology pales in comparison to the cost. In contract management, legal analysis, biometric verification, identity recognition, etc., this technology provides accurate solutions at a fraction of the cost.

The population of the country needs to be informed of the multitude of financial, political, and institutional challenges that come along with the inevitable rise in proficiency, efficiency, and sustainability so they can take full advantage of all the benefits of AI for economic prosperity and development. This will ensure that the majority receives effective equity. Above all, if we look at the various technologies of science, but we can see how far we have come using technology in each case. From the depths of the ocean to the surface of Mars, where accurate data from artificial intelligence triumphs, There, we can place this technology of science by our side to speed up our justice system. Maybe its use is very limited. But there is no doubt that its possibilities are attractive. In other words, every field of technology depends on how people manage it. So, I think artificial intelligence can play an important role in speeding up the judicial process in our country as compared to the outside world. But it must be remembered that this technology or device will have a human assistant to help people. never a human replacement.

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