



AI in Law: How Artificial Intelligence Is Transforming the Legal Profession in Indonesia

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Abstract

The progress on the development of Artificial Intelligence (AI) has widely transformed a new era in the digital technology, social economic, human need and professional behavior. Eventually, artificial intelligence automates even more aspects of legal profession. Furthermore, AI allows the legal profession to automate lower-level tasks, freeing time to focus on complex analysis and client interaction. The research aims to know the literacy of legal professional on the use of AI. The methods used in this study are normative-empirical legal research. Furthermore, research uses primary data which obtained from questionnaire survey, secondary data i.e., law, books, journals and other related legal sources for research. Meanwhile, the research will analyze through descriptive qualitatively. The research shows that the literacy level of law enforcers in the use of AI is in the medium category. Data shows that 75% of legal professional shows their positive respond about the implementation of AI in their profession. While other shows, 8% of high percentage and 17% of low percentage.

Keywords: Artificial intelligence, Legal profession, Literacy

Introduction

Artificial intelligence (AI) is impacting practically every sector and profession, with certain industries and professions being affected more quickly and deeply than others. In this regard, AI is having a significant impact on legal practice. professionals in the short term, it is already being used to examine contracts, uncover important -

documents during the discovery process, and conduct legal research. AI is now being used to assist design contracts, anticipate legal outcomes, and even propose judicial judgments on punishment or detention. Previous study conducted, shows that there is a significant difference in the level of accuracy between Artificial Intelligence (AI) machines and human advocates turned out to be more accurate AI machines than advocates (Gellers, 2020). The AI

machine named Robot Ross is faced with 20 advocates in the United States on identifying legal problems about 30 legal cases within 4 hours. Which, the results of the trial showed that human advocates achieved an average accuracy of 85% while Robot Ross achieved 94% accuracy in reviewing and identifying legal problems (Dwi Putro, 2020). Additionally, in China also experiments begun on AI used in the legal profession, one of which is the Chinese-made AI Prosecutor the machine is reported to have been built by the Shanghai Pudong People's Prosecutor's Office (Stephen Chen, 2021).

AI or what can be said as a man-made electronic robot where a computer machine is designed to be able to do a human-like audience job as in general, or even this computer machine can do a better job than done by humans (Nasri, 2014). Technology today, plays a very important role in the order of community life because technology can change people's attitudes and behavior. As well as AI has also involved into various fields including on legal professions (Mufidah & Habibi, 2019). For instance, in 1987 the first AI and legal science was held at Boston University US (Hu & Lu, 2020).

Furthermore, the United States of America and China, applied the use of AI in the legal profession to the advocates. In Indonesia, UMBRA law firms firstly initiated the used of AI in order to read and analyze legal documents with volume and speed that exceeds humans. This kind of AI created by Luminance developed by mathematicians from the University of Cambridge (Firm, 2018).

The current legal professions will create a renewal such as for example will appear new legal professions created by humans who in the future can help human work as a jurist. As we currently know the existence of AI robots in various legal professions for example some studies mention that the use of AI robots in the legal profession will have a positive impact in the resolution of legal cases such as chatbots that can help the public to consult legal problems at a cost-effective and easier.

The research aims to know the literacy of law profession in Indonesia in the use of AI during their work and professional practices. The potential benefits of artificial intelligence in the legal field are considerable. It could also enhance professional productivity and help them avoid costly errors. In rare situations, it can also be used to grease the wheels of justice, speeding up investigation and decision-making.

Methods

The method used normative legal research with a statute approach and conceptual approach. The statute approach evaluates all applicable laws and regulations related to the legal problems faced. Furthermore, Secondary data includes primary legal materials (relevant legislation and court decisions), secondary legal materials (books, journals, scientific papers, research reports, theses, etc.) ,and tertiary legal materials (law dictionaries and language dictionaries). Data that has been processed for further qualitative analysis.

Discussion and Result

The future of AI in Law in Indonesia: Transforming Legal Profession

In Indonesia, the development of technology shows the robust impact on people's lives (Saidah, 2021). Then it must be recognized that technology will determine for sustainability in human life, especially in the State of Indonesia which is currently facing an industrial revolution 4.0 (Hadi & Murti, 2019). Previous studies have mentioned that the term industrial revolution 4.0 first appeared in 2011, at that time when the government of Germany had introduced industrial revolution 4.0 for its strategy and utilization (Hofmann & Rüsçh, 2017; Kurniawijaya et al., 2021). The use of artificial intelligence is one of them in the legal sector where in Indonesia has tried to implement artificial intelligence in the legal sector such as law firm UMBRA (UMBRA, 2022). Where has used artificial intelligence to read and understand legal documents with a volume and speed that exceeds humans (Amrizal & Aini, 2013).

Artificial intelligence used in Indonesia is a product of Luminance developed by mathematicians from the University of Cambridge (Palacín et al., 2017). Luiminance is a London-based company whose software is trained by legal experts & mathematicians from the University of Cambridge designed to help legal practitioners collaborate, Luiminance can understand language in documents that are based on a context and content instead of just looking for specific (Samson Abiodun & John Lekan, 2020) . This luminance can identify anomalies or discrepancies in the legal documents analyzed (Abdul Jalil & Mohd Sheriff, 2020).

In addition, ai implementation in Indonesia has also implemented artificial intelligence named Robot LIA (Legal Intelligent Assistant), Robot LIA is the first legal chatbot in Indonesia which was launched on Wednesday, August 7, 2018, the online law platform first announced the LIA launch of LIA was inaugurated by Minister of Communication and Informatics (Aida, 2018). Chatbot Lia located in Indonesia which aims to help the public get legal information or legal education more easily and sparingly that can be accessed on the lia.hukumonline.com platform (Aditya, 2018). This LIA robot is depicted with a 23-year-old woman who is smart who also understands the law, so the public can easily consult with Lia's robot about legal issues for free (Amal, 2018).

In the robot Lia can only answer 3 categories of legal problems, namely the marriage law consisting of the conditions of marriage, marriage of different religions, polygamous marriage and mixed marriage. The second category of divorce law consists of divorce procedures, divorce costs, to child custody. And the last is the inheritance law according to Islamic law, inheritance according to western civil law and inheritance according to customary law (SIP, 2018). In addition, that the application of Ai is also found in the medical practices (H. A. Hakim et al., 2021). The use of Ai will help in medical practice to be faster in providing diagnoses to the patient (Budiman et al., 2020). In Indonesia, basically the utilization of technology in the field of Health has been permitted by the law of regulations regarding technology used in the field of health regulated in the Health Law article 42 of 2009 (DPR, 2009). And applying Ai to the medical world will make it easier for professional doctors to treat more patients, because Ai tools can help them to make better diagnostic decisions and can also improve treatment outcomes and also reduce medical errors (Marlon et al., 2020).

Then the last implementation of AI in Indonesia is also applied to the banking world. The application of Ai in banking can provide a great advantage that can also save bank budgets and can also facilitate data access because customers will increase efficiency in a timely manner. Because with the use of Ai can also facilitate banks in making strategic decisions and also quickly. In Indonesia ai users are PT Bank Rakyat Indonesia Tbk or BBRI. BBRI has an artificial intelligence named Sabrina that can represent the new intelligent BRI assistant, which can be used through social networking applications such as the Facebook Messenger app, as well as chat-based telegram applications (purnomo, 2018).

AI is also used to identify transactions that are fraudulent, adopt fast and accurate credit score and also automate data management tasks sharply (Samsudin et al., 2021). The development of technology used by the Bank industry is very beneficial in carrying out an activity or a transaction (Wahyuningsih & Janah, 2018). However, the application of Ai in the banking world can also have a negative impact, this is due to crimes committed by hackers in the form of criminal acts of theft or leaking of bank secrets (Sulisrudatin, 2014). Where the bank is a company that maintains the confidentiality of its customers so that the bank adheres to the principle of confidentiality then regulations related to the use of Ai in banking activities have not been regulated so that it still uses an interpretation through existing regulations such as the Banking Law and the ITE Law (L. Hakim, 2018).

The Challenges and Benefits on the Use of AI

In the field of technology, the Industrial Revolution 4.0 technological development is currently a major factor in driving the growth of the industry in Indonesia. Especially at this time Indonesia is entering the graying of the

technological era that is growing so rapidly (Sawitri, 2019). Behind it all apparently there are several levels of evolution of artificial intelligence technology, the first is Artificial Narrow Intelligence (ANI) or Weak AI. ANI technology has clearly shown, for example in Indonesia this ANI technology has been applied to smartphones such as Siri, Facebook or Amazon applications (Rivoltella, 2018).

Ani technology is also available in automatic translations such as google translate, Watson, IBM (Scx & Pte, 2019). ANI technology if implemented in the legal profession in Indonesia has been seen in chatbot robot Lia, robot Lia which can be found in online platforms for free in lia.hukumonline.com, where the public can consult legal issues cost-effectively and free of charge. Then the second is called Artificial General Intelligence (AGI) or what can be called a powerful Ai that can be equated with the ability of a human audience (Bunyamin, 2018). And the third is called Artificial Super Intelligence (ASI), which is an artificial intelligence that is made with the aim to exceed the capabilities of humans (Bostrom, 2012).

In the current era, artificial intelligence owned by Indonesia still exists in the ANI category, while ASI and also AGI are still said to be technologies for the future. But the future for AGI and ASI is predictable which does not take long for artificial ingenuity to be present. According to Mead & Kurzweil (2006), AGI can be achieved in 2029, while ASI in 2045 and then will certainly be followed by a rapid transformation of thought in society and also the economic sector, although some still have a skeptical mind about this (Scx & Pte, 2019). But on the other hand there are also shortcomings in implementing artificial intelligence in Indonesia to the legal profession. As we know where in Indonesia the utilization of Ai in the world of lawyers is still not regulated in the laws (Revan, 2021).

Although in the 1945 Constitution article 28 C paragraph 1 claims juridically the use of Ai which stated: "Everyone has the right to develop themselves through the fulfillment of their basic needs, entitled to education and benefit from science and technology, art and culture, in order to improve their quality of life and for the welfare of mankind" (Lubis et al., 2019) Furthermore, the general explanation of Law No. 11 of 2019 concerning the National System of Science and Technology states that: "To ensure everyone is entitled to the benefits of Science and Technology, the government advances Science and Technology. The promotion of Science and Technology is carried out by upholding the value of religion and the unity of the nation for the advancement of civilization, as well as the welfare of mankind, therefore the promotion of Science and Technology aims to improve the quality of life, welfare, and dignity of the Nation. The Indonesian nation realizes that in the development of science and technology is needed, mastery, utilization, and promotion to strengthen Indonesia's competitiveness position in global life..." (Government et al., 2019).

Although AI has been recognized by several laws in Indonesia, the application of Ai in Indonesia does not yet have strong legal certainty, especially in Indonesia

does not have regulations that specifically regulate the protection of personal data for all community citizens (Kurniawijaya et al., 2021). Indonesia only has law No. 19 of 2016 on Information and Electronic Transactions (UU ITE) as a regulation governing the legal protection of personal data in data traffic in cyberspace, but the ITE Law only touches on the subject of personal data protection without further containing provisions detailing the protection of personal data (Kemkominfo, 2016). Furthermore, personal data protection regulations are still spread in some other rules this shows that the government has not taken personal data protection seriously. In addition, in Indonesia strengthening human resources (HR) that can lead to superior humans with those who have high creativity (Abdusshomad, 2018). Of course, it must have a close correlation with work productivity to win a global competition in the midst of ongoing changes and in the midst of an era of artificial intelligence. It has grown so rapidly (Tampubolon, 2014).

At this time, Indonesian Human Capital Index (HCI) is far behind if compared to the other countries, even with ASEAN countries, Indonesia is still far behind (Yasa et al., 2021). See this bad condition, it is necessary for the efforts of the stakeholders to prepare strategic steps that are right on target so that Indonesia's human capital indexes in the future can be go up and be more productive. One of them is to prioritize the strategic steps of stakeholders in this case the government by better educating superior human resources (Human Resources) (Michael, 2017).

Therefore, the development of Ai implementation in Indonesia is legal responsibility (Tan et al., 2022). Legal actions carried out by Ai robots in all professions should be accounted for. The non-recognition of ai as a legal subject according to positive law in Indonesia raises new problems (Ghazmi, 2021). Then a doctrine of substitute accountability or so-called (Vicarious Liability) that regulates a responsibility (Mahmud, 2020). on the other side who did not commit an act or a mistake that became the basis for AI is accountability. So that the issue of AI is accountability for his legal actions lies with the organizers or parties who have hired Ai (Dr. Sigit lesmonojati, 2019).

This is based on the provisions of the UN Convention on the Use of Electronic Communications in International Contracts, that any action or message generated by a programmed computer is the responsibility of the party involved. Program the computer (United, 2007). In Indonesia, the replacement responsibility for Ai's actions applies in Indonesia as stipulated in article 31 PP PSTE or called Government Regulation on the Implementation of Transaction and Electronic Systems that the responsibility for every "deed" of Ai is with the organizers. (Electronics, 2016). As has been applied to several other countries although there are some challenges faced, but it does not include the possibility for Indonesia to apply Ai to the legal profession, for example in the profession. lawyers and also on online legal chatbots.

Instead of that, in Indonesia, AI will not be able to replace the legal profession in Indonesia, he is just a tool. Because the robot is rigid has no feelings and also a conscience. While the law in Indonesia has a purpose that is a certainty, expediency and also justice, robots can only help in legal certainty but not in justice. In addition, because in Indonesia the subject of law is only 2, namely humans and legal entities, while robots are not part of the legal subject. where for example a lawyer who has a code of ethics that does impose an obligation on each Advocate to be honest and responsible in carrying out his profession either to the client, court, state or society and especially to himself. In this situation where a robot lawyer if he makes a mistake or there is an error system, the robot cannot be held accountable and who can be held accountable is as the organizer.

Survey Literacy on the possible use of AI within the Legal Profession in Indonesia

The legal profession is evolving at an unprecedented rate, much like the area of technology. New organizations, such as technology corporations that supply document generation tools and artificial intelligence systems to assist legal services, will meet society's legal demands. However, in the era of society 5.0, with digital advances and the emergence of artificial intelligence machines and big data, this eventually led to a shift in individuals' perspectives and approaches to law, which became an "alarm" for disruption to the legal profession, particularly advocate offices, notaries, including courts, were first often ignored due to the rise of artificial intelligence (Agustini et al., 2022).

The availability of AI applications in the legal professions will revolutionize the following areas of the law for instance litigation document review, contract management, investigations process, due diligence, and even more to the litigation prediction during court trial.

AI has been developed rapidly in the last decade. In contrast to the natural intelligence possessed by humans, AI has consistent properties. AI can only be changed by the system or program that manages it, unlike natural intelligence which will always experience changes due to human forgetfulness. From there, AI is defined as an artificial system that comes from computer implementation, which is very similar to human intelligence.

Recent development of technology, has taken an important role in people's lives, especially in Indonesia which is currently facing an industrial revolution 4.0. With the emergence of technology in various sectors can be a big opportunity for various industries, including law industrial (Kurniawijaya et al., 2021). April 4, 2018 the government has planned a program in the development of industrial 4.0 known as making Indonesian 4.0, the government agenda is to realize the preparing of ten million new jobs in 2030 where the Indonesian industry at that time has been expected to be able to implement industry 4.0 and compete with the other countries (kominfo,

2019). Furthermore, Indonesia has started the process of adaptation to industrial 4.0 by improving human resource competence through a link and match program between education and industry (kominfo, 2019). This effort is carried out synergistically between the Ministry of Industry and Development Planning Agency at Sub-National Level, the Ministry of Manpower, the Ministry of Education and Culture and the Ministry of Research and Technology. The Ministry of Industry has set four steps in dealing with industry 4.0, namely (Ministry of Industry, 2017):

- a. Encourage all the workforce in Indonesia to continue to improve the skills and expertise first in the use of internet of things technology or integrate internet capabilities with industrial production;
- b. Utilizing digital technology to increase productivity and competitiveness for small and medium-sized industries in order to be able to penetrate the export market through the E-smart SMEs program;
- c. More optimal utilization of digital technology in national industry; and
- d. Encourage technological innovation through start up development by facilitating businesses to have more technology-based entrepreneurs throughout Indonesia.

However, AI deployment in Indonesia is very limited due to a variety of issues, including workers' insufficient abilities to manage AI and an underinvestment to construct AI infrastructure. Several prior research have shown that Indonesia has weaker technology absorption than other Asia Pacific areas (Ririh et al., 2020). Like previously stated on the potential and problems, the government's efforts in reacting to the presence of AI, a questionnaire was distributed in this study to measure law enforcement literacy in the use of AI. This is to show how much potential the use of AI has in assisting legal professionals in their duties and carrier. A survey through a questionnaire was conducted to representatives of the legal profession in Magelang. The several parties involved came from several agencies including: Advocates, Notaries, Police, and Judges.

An overview of the level of literacy activity of law enforcement in Magelang is illustrated through a scale from 0-100, where the number 0 indicates the lowest level of literacy activity, while the number 100 indicates high literacy activity. The index numbers from 0-100 are composed of various indicators. For further analysis, the index numbers from the 0-100 scale are grouped into 5 categories, namely:

1. an index number of 0-20.00 is a very low category;
2. an index number of 20.01-40.00 is a low category;
3. an index number of 40.01-60.00 is in the medium category;
4. an index number of 60.01-80.00 is a high category; and
5. index number 80.01-100.00 is very high category.

Based on the results of a survey conducted presented in Figure 1, it shows that the literacy level of law enforcers in the use of AI is in the medium category. Data

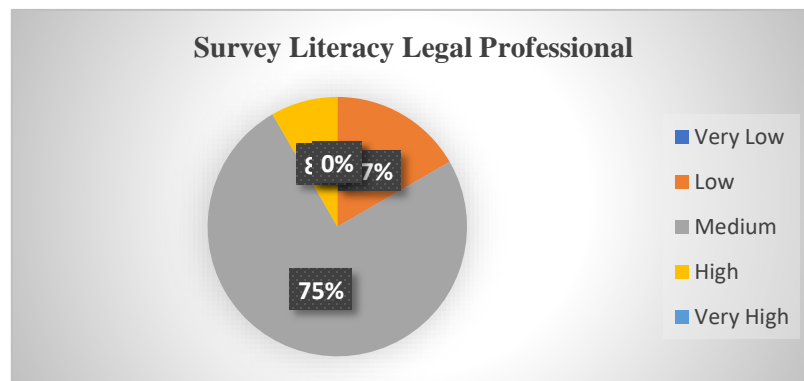
shows that 75% of legal professional shows their positive respond about the implementation of AI in their pArofession. While other shows, 8% of high percentage and 17% of low percentage.

Conclusion

Based on the results of the research and discussions conducted, the following conclusions can be drawn.

1. The regulation regarding the role of traditional villages in efforts to prevent child sexual violence is not explicitly defined in the Child Protection Act, the Sexual Violence Act, and related regulations at the provincial and Buleleng Regency levels. The regulation regarding the role of the community in efforts to combat child sexual violence is only generally stipulated in legal provisions governing the general role of the community in preventing child sexual violence. This has implications for the role of traditional villages, which has been relatively limited due to the lack of legal foundation concerning the role of traditional villages. Therefore, legal grounds regarding the role of traditional villages in efforts to prevent child sexual violence in the future are necessary.
2. The role of traditional villages in efforts to prevent child sexual violence in Buleleng Regency is not very significant. This is closely related to the absence of regulations defining the role of traditional villages in efforts to prevent child sexual violence in Buleleng Regency. Traditional villages can only function similarly to the general community, limited to reporting cases of child sexual violence in Buleleng Regency to the police, who are law enforcement authorities with the jurisdiction to address incidents of child sexual violence in Buleleng Regency.

The result of survey to the legal professional



In this research, a survey was conducted regarding the literacy of the legal profession in the use of AI based on three components, namely digital transformation of the legal profession, the potential for the application of AI Robots in the Legal Profession, the challenges of implementing AI Robots in the legal profession.

Regarding legal professional knowledge in "digital transformation of the legal profession" the results are as follows as presented in table 1.

Table 1. Digital transformation of the legal profession

No.	Questions	Yes	No
1	Has digital development caused disruption in various aspects of life?	100%	0%
2	Whether the current digital developments also affect legal practice in Indonesia?	100%	0%
3	Does your institution also among those who take advantage of digital developments in completing legal efforts?	100%	0%
4	Did you know that AI robots have been used in the legal profession in various developing countries?	83,3%	16,7%

Survey data shows that all respondents are aware of the impact of digital transformation on the legal profession. That digital developments have caused disruption to various aspects of life, affecting current legal practice. Several survey results of respondents show that digital developments have caused disruption in various aspects of life (100%). current digital developments also affect legal practice in Indonesia (100%), the use of institutions in the use of AI (100%). And finally, knowing that AI robots have been used in the legal profession in various developing countries (83.7%) while (16.7%) do not know that the use of robots has been used in the legal profession.

Meanwhile, a survey on the potential application of AI Robots in the Legal Profession shows the presentation in Table 2 as follows:

Table 2. The potential for the application of AI Robots in the Legal Profession

No.	Questions	Yes	No
1	With the existence of AI robots, can we solve the crisis of a shortage of law enforcement in Indonesia?	66,7%	33,3%
2	Is the existence of AI robots an answer for justice and honesty in law enforcement?	33,3%	66,7%
3	Does the existence of AI robots (for example, chatbots) make law enforcement's duties easier?	75%	25%

4	In terms of time, whether AI robots can analyze legal cases faster?	83,3%	16,7%
5	In terms of precision/accuracy, whether AI robots can analyze legal cases better than humans?	25%	75%
6	Does your institutio already use AI robots?	8,3%	91,7%

From the survey results in table 2 above, it shows that, with the presence of AI robots, it is able to solve the crisis of a shortage of law enforcement in Indonesia (66.7%) giving a positive response with a "yes" answer. This is because AI is in principle based on data which will provide analysis according to the correctness of the data entered. The existence of AI robots can be a solution in law enforcement with justice and integrity, on the other hand (66.7%) of respondents disagree with this question. This is of course based on that AI as a robot has weaknesses in terms of the sense of humanity in considering all legal aspects. Furthermore, the existence of AI robots (eg chatbots) can make it easier for law enforcement to carry out work as shown by the percentage (75%) of respondents giving a positive response to this question. It is felt that chatbots make it easy for both users and service providers in banking transactions, for example. Furthermore, in terms of time, AI robots can analyze legal cases more quickly (83.3%), while in terms of accuracy, AI robots can analyze legal cases better than humans, only (25%) of respondents believe this. And to find out which institutions/places the respondents work have used AI robots, the resulting data (91.7%) have not utilized AI in their work. This is of course what has been faced so far in the provision of AI is still faced with various challenges, for example, the cost is quite expensive, human resources are competent in carrying out maintenance and a culture of society that has more trust in law enforcement that has existed. The results of the latest survey, related to the challenges of implementing AI Robots in the legal profession, are presented in Table 3 below.

Table 3. Challenges of implementing AI Robots in the legal profession

No.	Questions	Yes	No
1	Whether the use of AI robots in the legal profession cause potential data leakage?	91,7%	8,3%
2	Is a strong legal basis necessary for the use of AI Robots in the legal profession?	100%	0%
3	Can AI robots become assistants for law enforcement in carrying out their duties and work?	83,3%	16,7%
4	Can AI robots replace humans (law enforcers) in carrying out their duties and jobs?	0%	100%

In the latest survey results, it was found that the use of AI robots in the legal profession can lead to potential data leakage (91.7%) of respondents believe this. This

is due to the government's current lack of attention to cases of data leaks, which often occur even to state officials. This is the background to the need for a strong legal basis regarding the application of AI Robots in the legal profession, as shown in (100%) of respondents' answers. Another important question in this research is related to the status of AI robots that can become assistants for law enforcement in carrying out their duties and work, as shown (83.3%) but the possibility that AI robots can replace humans (law enforcers) in carrying out their duties and work in the future, the respondents answered (100%) they did not believe in this.

Conclusion

Artificial intelligence is transforming the legal profession and the practice of law. Some people fear it will eventually replace attorneys. But AI legal software produces the opposite effect. It has the potential to help lawyers fall in love with their careers all over again while saving time and money in the process. By automating repetitive tasks, lawyers can focus on higher-thinking and more complex operations of their practice. Attorneys may be able to say goodbye to long hours spent reviewing documents. They can spend more time with clients and devote more energy to formulating arguments and strategic planning. For the legal profession, the implementation of AI is a victory for everyone involved. Based on the results of a survey conducted, it shows that the literacy level of law enforcers in the use of AI is in the medium category. Data shows that 75% of legal professional shows their positive respond about the implementation of AI in their profession. While other shows, 8% of high percentage and 17% of low percentage.

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