2024 Questionnaire of the 1st Study Commission IAJ-UIM "The Effects of Artificial Intelligence on the Judiciary"

Taiwan Judge Kuo, Jen Sheng

1. Do judges in Taiwan utilize artificial intelligence technology ("AI"), and how so?

Judges in Taiwan have started exploring and employing artificial intelligence (AI), but full-scale implementation is still in its nascent stages. AI is being used primarily for tasks such as mandarin speech recognition, sentencing factor intelligent analysis system, analysis for electronic dossier, and intelligent customer service chatbot rather than making judicial decisions. The aim is to improve efficiency and reduce the workload on judges.

The use of AI in Taiwan Judicial System is as follows:

1.1 Mandarin Speech Recognition

(1) Mandarin Speech Recognition for Court Transcripts

This system employs the latest AI technology using Deep Neural Networks (DNN). It utilizes a speech recognition engine and models developed and trained on a legal specialized corpus containing a large amount of publicly available judgments and transcript data. This allows every participant in a court proceeding (including judges, citizen judges, prosecutors, lawyers, defendants, plaintiffs, and witnesses) to have their statements and opinions transcribed in real-time through speech-to-text conversion. With high recognition accuracy, this system reduces the need for manual transcription, saves court time, and increases the efficiency of court operations.

(2) Offline Speech Input Software

This system uses the speech recognition engine and models which enable judges, clerks, or assistants to perform speech input smoothly on laptops, tablets, or desktop

computers without needing an internet connection. By using speech to draft judgments or other documents, it improves work efficiency and reduces occupational injuries caused by long-term typing.

(3) Voice Command Extension for Offline Speech Input

This feature is an extension of the offline speech input software, allowing judges to use voice commands to operate legal retrieval systems (search for judgments, statutes) and to view or display electronic case files.

(4) Mandarin Speech Recognition for Judicial Conference

This system uses speech-to-text technology to address the need for meeting or conference record transcription in courts.

1.2 Sentencing Factor Intelligent Analysis System

This system uses artificial intelligence and deep learning methods to automatically label sentencing factors for judgments involving five types of cases: aiding fraud, driving under the influence, theft, assault, and hit-and-run. By doing so, it updates the Sentencing Information System, enhancing the speed of analyzing sentencing factors and updating reference judgments. This ensures that sentencing adheres to the principles of proportionality and equality, thereby increasing public trust in the judiciary.

1.3 Intelligent Analysis System for Electronic Dossier

This system processes "electronic dossiers" created by scanning case documents obtained by the court and using Optical Character Recognition (OCR). The content format and text of various litigation documents are used to train the system's AI models. Once trained, these models can automatically analyze future electronic dossiers and generate corresponding PDF bookmarks for the case content. This reduces the time assistants spend organizing electronic dossiers. Additionally, the system can automatically search, analyze, and mark six types of personal data (including birthdates, addresses, phone numbers, ID numbers, passport numbers, and financial account numbers) for redaction. That minimize the risk of personal data leakage and enhance the efficiency of administrative tasks.

1.4 Intelligent Customer Service Chatbot

This system employs natural language processing and other technologies to provide the public with instant answers to questions about the judicial system or litigation procedures while browsing the Judicial Yuan's global information network.

Users can query the court schedule or the progress of ongoing trials by asking questions, thereby enhancing the efficiency of public service.

a) If not, have judges in Taiwan considered utilizing AI, and, if so, in what ways?

Taiwan Judicial System is considering utilizing AI System for Drafting Judgments, which is in the pipeline. This system uses artificial intelligence technologies, particularly natural language processing (NLP), to generate draft judgments for high-volume, standardized case types, such as driving under the influence and aiding fraud. By extracting features from indictments, the system produces the most suitable draft judgments. It is crucial to emphasize that this system operates on the premise that the judge has already formed an opinion (the judge must first decide whether the verdict is "guilty" or "not guilty"). The system serves only as an aid in drafting judgments and cannot replace the judge's role in determining facts and applying the law.

b) Is the use of AI in legal proceedings regulated?

The use of AI in legal proceedings in Taiwan is still largely unregulated, with current discussions focusing on ethical guidelines and standards. As AI adoption increases, there are ongoing debates about the need for formal regulations to ensure transparency, fairness, and accountability in its application.

c) Does the use of AI impact the handling of evidence?

The use of AI can significantly impact the handling of evidence by:
Enhancing Evidence Analysis: AI can help in the efficient analysis of large datasets and digital evidence, identifying patterns and anomalies that might not be immediately evident to human reviewers.
Ensuring Consistency: AI can standardize the review process, potentially reducing human error and bias.

The reliance on AI tools might also introduce questions regarding the accuracy and reliability of AI-analyzed evidence, as well as issues of transparency in how AI algorithms reach their conclusions.

2. What are the pros and cons of having judges utilize AI?

a) What are the possible effects of AI on the administration of

justice?

Pros:
Increased Efficiency: AI can streamline administrative tasks, allowing judges to focus more on complex legal reasoning.
Consistency and Objectivity: AI can help in maintaining consistency in legal interpretations and reducing human biases.
Accessibility: Improved access to legal information and precedents can enhance the overall quality of judicial decisions.

Cons:
Over-reliance on Technology: There is a risk of judges relying too heavily on AI, potentially undermining human judgment and discretion.
Bias in AI Systems: If AI systems are trained on biased data, they may perpetuate or even exacerbate existing biases.
Transparency and Accountability: AI decision-making processes may be opaque, making it difficult to understand and challenge their outputs.

b) What are the possible effects of AI on judicial independence?

Positive Effects:
Support in Decision-Making: AI can provide valuable support to judges, helping them make more informed and well-researched decisions.
Reduction of External Influences: By providing consistent and data-driven insights, AI might help reduce the influence of external pressures on judges.
Negative Effects:
Erosion of Judicial Discretion: Over-reliance on AI recommendations might limit judges' ability to exercise their discretion and individual judgment.

3. Should there be limits on the use of AI by judges, and, if so, to what extent?

There should be limits on the use of AI by judges to ensure it serves as a tool to enhance, rather than undermine, the judicial process. Chief Justice of Taiwan constitutional court and President of Judicial Yuan Tzong-Li Hsu stated that regardless of how AI technology develops, as long as adjudication remains an exercise of national public power, the spirit of constitutionalism cannot be challenged or undermined.

Under this premise, the application and challenges of generative AI in judicial practice should particularly consider the following points:

(1) Accountability: When AI is applied in judicial practice, the accountability of the judiciary remains with humans, not AI.

(2) Impact on People's Rights: The stronger the application of AI in judicial practice, the greater the potential impact on people's rights. Therefore, it is essential to consider whether legal reservations should be used to regulate the application of AI, as internal judicial guidelines alone may not justify its application.

(3) Transparency of AI Algorithms: The greater the impact of AI on judicial outcomes, the more necessary it becomes to open the "black box" of AI algorithms. This transparency allows parties to examine the accuracy and legality of judicial outcomes. It is also crucial to ensure that the information used to train AI aligns with the values of a free and democratic constitutional system.

(4) Human Judge Reservation: It is necessary to deliberate on whether certain matters should be reserved for human judges only, meaning purely decided by human intellect without AI involvement.

(5) Right to Human Adjudication: Correspondingly, it should be considered whether individuals have a fundamental right to be judged by humans, or a "right to not be judged by AI."

(6) Cybersecurity: The more AI is used in exercising national public power, the greater the obligation to address cybersecurity issues to ensure the protection of personal privacy and official secrets.

Moreover, Judges should have the final say in all decisions, with AI serving as an advisory tool rather than a decision-maker. The impact of AI on the judiciary should be continuously monitored and evaluated to ensure it aligns with the principles of justice and judicial independence, so clear ethical guidelines should be established to govern the use of AI in the judiciary, addressing issues such as data privacy, security, and the ethical implications of AI-driven decisions. The Judicial Yuan will refer to the "Guidelines for the Use of Generative AI by the Executive Yuan and its Subordinate Agencies" as a checklist for the development of various AI systems. Additionally, appropriate guidelines specifically for the development of AI in the judicial system will be issued in due course to ensure the steady development of various AI applications.