Lernende Systeme

GERMANY'S PLATFORM FOR ARTIFICIAL INTELLIGENCE

Artificial Intelligence and law

White Paper

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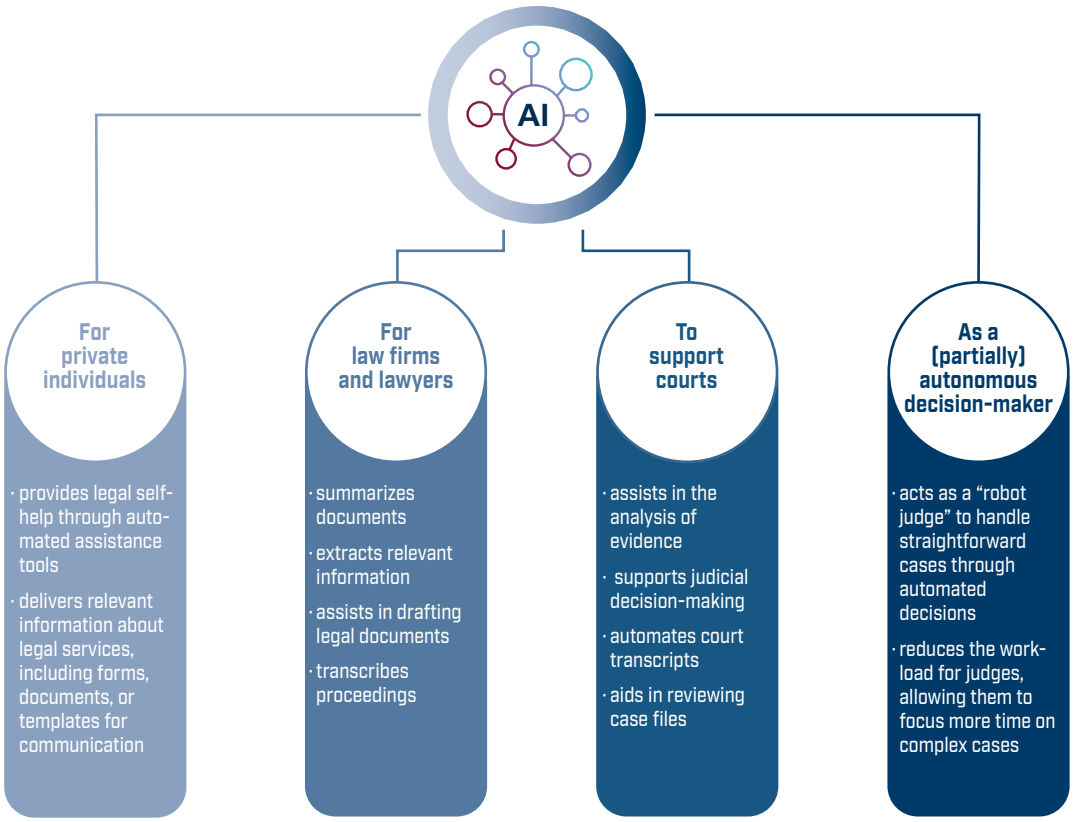
Executive Summary

Artificial Intelligence (AI) is making inroads into many fields, including the legal sector. Its application enhances the efficiency and speed of legal processes while improving access to legal information as well as enhancing the understanding of legal information. This can provide relief, not only for lawyers but also for clients and individuals seeking legal assistance. The latter can benefit from AI-powered chatbots that support self-help in general legal matters and redirect complex inquiries appropriately, easing the workload for law firms while enhancing 24/7 service availability. However, while AI may prove immensely helpful, its use also entails certain risks. To ensure the responsible application of AI in the legal field, it is crucial to maintain clarity regarding its use and potential impacts, while safeguarding data protection and security.

Applications for AI in the legal sector

Depending on the level of autonomy of the AI systems used, opportunities arise to reduce the workload of the judiciary, improve citizens' access to the legal system, and support fair verdicts. AI systems are already being applied in various ways within the legal domain, influencing individuals, businesses, law firms, and courts at multiple levels. For instance, chatbots provide private individuals with automated legal self-help information, AI-powered tools assist law firms in researching legal texts, support the prediction of rulings, and even draft legal documents. There are four main areas in which AI technologies can be used in the justice system.

Contributions of AI to judicial decision-making with increasing impact



Source: own visualization

AI for individuals and businesses: In legal self-help, it is already common to use Google or other search engines to gain initial insights into legal matters before pursuing the often costly path of legal consultation and representation. Examples include accessing forms such as family law applications in the State of Florida, though this does not constitute legal advice in the traditional sense. A significant advancement in quality legal self-help is the emergence of expert systems. These systems are based on databases containing specialized legal knowledge. When paired with AI-powered chatbots, they can process user inquiries, extract relevant information, and provide meaningful answers and recommendations. For instance, chatbots can provide forms, documents, or templates to help individuals assert their rights against large companies – such as claiming passenger rights from airlines.

The first AI-powered legal chatbots are already being used in practice as a means of communicating with clients. With the rapid advancement of large language models, these tools could soon generate case-specific documents such as emails or letters. They may also be used as applications for automated legal document assembly, enabling law firms to create simple legal documents based on case-specific inquiries.

AI for law firms: In law firms, where much of the workload involves text processing, generative AI systems can take on routine tasks, such as drafting correspondence, filing motions, or preparing legal briefs. AI tools could be particularly useful for automating time-intensive processes, such as assembling documents or extracting relevant information from large volumes of paperwork – commonly needed in cases like corporate mergers. This can save resources and may minimize errors. However, effective implementation requires a sufficient level of document digitization within the firm.

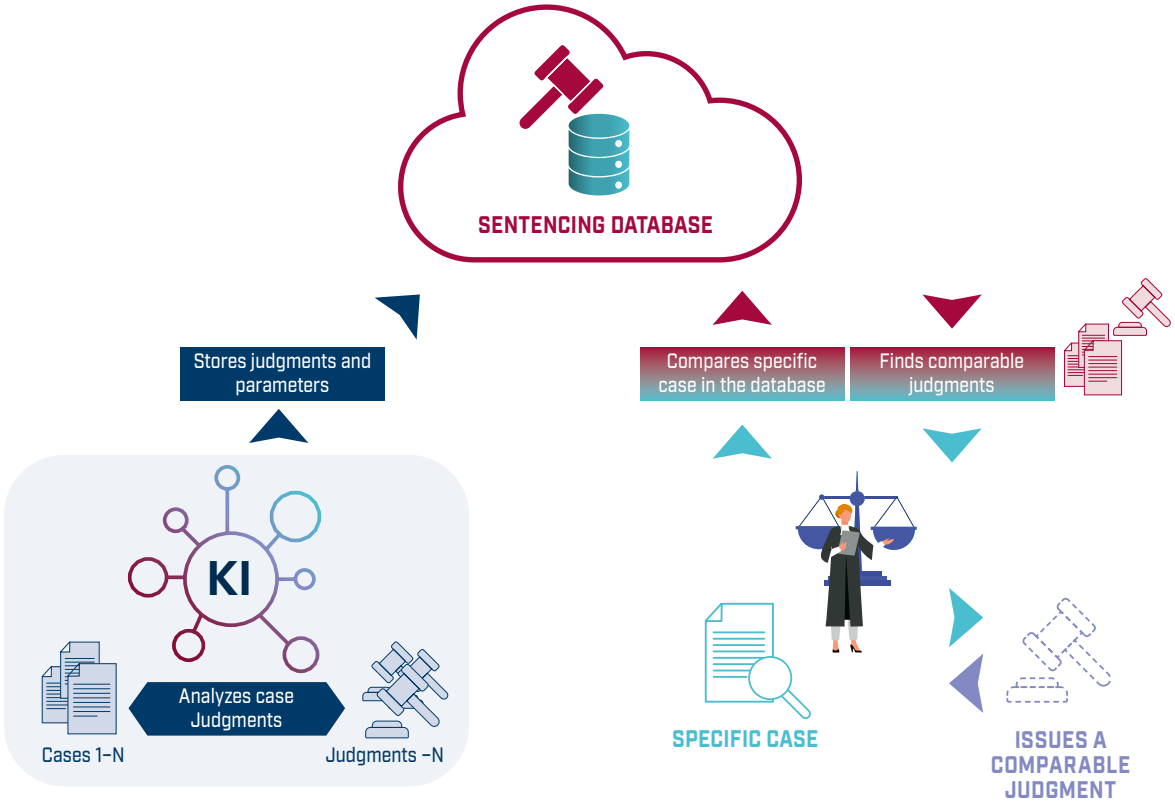
Generative AI systems can assist in predicting the likely outcome of legal proceedings by analyzing historical rulings in similar cases. By identifying patterns in the underlying facts and combining them with the decision-making parameters of previous judgments, these systems can generate predictions about case outcomes. For example, the software CaseCruncher Alpha demonstrated this capability as early as 2017, outperforming lawyers in a one-week competition by correctly predicting 86.6 per cent of insurance claim disputes.

AI to support courts: AI systems can also play a supportive role in court operations, for example, for data research and intelligent analysis of existing information. These tools can be employed to analyze evidence, including images, videos, and audio material, aiding investigative authorities and courts alike and thus supporting them by increasing efficiency and speed. In Italy, for example, the Toga programme is used as an intelligent database, which was developed jointly by AI experts, judges and lawyers and is based on a database of 4,000 crime typologies from Italian criminal law.

AI systems also expedite the analysis of case data in mass litigation cases, such as those involving the Diesel emissions scandal or the Wirecard fraud, where largely identical cases are adjudicated. The Stuttgart Higher Regional Court, for instance, uses the AI tool OLGA to manage Diesel emissions cases. Looking ahead, AI could also be deployed directly in courtrooms. Possible use cases here include the automated creation of transcripts, offering a more efficient and precise alternative to traditional notetaking.

AI can be used to build up sentencing databases that provide judges with a basis for comparison. For instance, a judge handling a theft case could filter similar cases based on criteria such as the value of the stolen item, the presence or absence of a confession, and any prior convictions. The judge could then reference rulings from other courts to guide their sentencing decision. These databases can serve as a framework, enabling judges to compare their decisions with precedent rulings. This approach helps justify or avoid significant deviations in sentencing, promoting consistency and fairness.

Structure and use of a sentencing database



Source: own visualization

Building on this, predictive justice systems offer an additional way to support judicial decision-making. For example, the AI-based predictive system COMPAS, used in U.S. states such as New York, Wisconsin, California, and Florida, analyzes large datasets from past court rulings and criminal records to calculate the likelihood of recidivism among convicted offenders. These predictions are incorporated into judicial decisions regarding early release, pretrial detention, and probation sentencing, helping to inform these critical determinations.

However, predictive justice systems such as the AI system COMPAS must be viewed critically. This is partly due to black box phenomenon and the susceptibility of AI systems to bias. Thus it is usually not possible for those affected or even for judges to understand how the decisions are ultimately reached and whether errors were made when calculating the risk assessment. A study (investigative platform ProPublica) was able to prove that the COMPAS algorithms, for example, generally assign black defendants a higher risk of reoffending. As a result, the software was modified so that judges are made aware of the system's limitations.

AI as a decision-maker: The highest conceivable level of AI application in the legal system, based on the degree of automation, involves automated court decisions. In these scenarios, AI moves beyond merely supporting judges and acts as an independent entity – a so-called "robot judge" – with extensive decision-making authority.

Such decision-replacement software could help streamline legal processes, enhance efficiency, reduce costs, and alleviate the burden on the judiciary. Currently, "robot judge" systems are not being used in Germany, nor are there any plans to implement them soon. However, fully automated AI adjudication is no longer purely a futuristic concept. Prototypes of such systems are already being tested in other countries.

Concerns and Challenges for the trustworthy use of AI

Despite the potential of AI in legal applications, there are specific challenges that arise concerning its general use and the development of corresponding AI systems. For this reason, AI systems used by judicial authorities are classified as high-risk applications under the EU AI Act (Annex III, Section 8). This classification entails specific requirements related to conformity certifications, technical documentation, human oversight, and transparency.

Regardless of the level of autonomy, several key aspects must be considered when deploying AI in the legal field: transparency, liability, data protection, and fairness. In addition to the ongoing issue of error susceptibility (e.g., hallucination), considerations must also include cloud-related concerns and shifts in the open market. It is crucial to ensure that these systems are compatible with the legal framework in place. Notable issues include the (still) insufficient quality of AI systems in legal applications, as well as ethical and legal concerns – such as the dignity and justice implications of AI participation in judgments or the right to a legally appointed judge (under Article 101, Sections 1 and 2 of the Basic Law of the Federal Republic of Germany).

Ultimately, this requires the avoidance of bias. For applications in the legal system that may have profound effects on individuals, the minimization of wrong decisions through algorithmic reproduction is of particular importance. This is also reflected in the classification of justice systems as high-risk AI in the European AI Regulation. In cases where AI recommendations are incorporated into judgments, mandatory human reflection on the recommendation should always be required in order to prevent judges from having blind faith in the AI systems. This should enable people to retain trust in the administration of justice. The demand for a human ultimate justification of case law is linked to the condition that judges are able to make and justify judgments with and without AI assistance. AI assistance must not lead to the (self-inflicted) incapacitation of judges.

Given the sensitive nature of this field, it is essential to establish specific frameworks, particularly technical ones, to meet the unique requirements of legal technology. Additionally, there is a need to ensure that relevant stakeholders in the legal sector possess the necessary qualifications. This includes fostering AI competencies in legal education, ensuring the availability and quality of data, safeguarding data protection and security, addressing black-box issues through transparency and explainability, investing in data and computing infrastructures, and guaranteeing human (final) decision-making authority. The rule of law is a fundamental pillar of democratic societies. Therefore, technologies that affect the rule of law must adhere to the highest constitutional and ethical standards.

Imprint
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