Criminal Justice Testing and Evaluation Consortium
A Program of the National Institute of Justice

Artificial Intelligence Applications for Criminal Courts

An overview of artificial intelligence applications and associated considerations for the criminal court system

This technology brief is the third in a four-part series that examines artificial intelligence (AI) applications in the criminal justice system. This brief focuses on AI applications within criminal courts, with particular emphasis on AI's role in addressing prosecutorial needs. These AI applications and associated needs may also be relevant to other types of courts, such as traffic and civil courts, as well as to other officers of the court—including defense counsel, judges, and court administrators.

It also introduces frameworks for evaluating AI applications and highlights critical risks to consider when deploying AI systems. Although many of the examples in this brief have not yet been widely adopted, AI has the potential to address various needs within the court system. Additional briefs include a high-level overview of AI within the criminal justice system and AI topics specifically related to law enforcement and corrections.

Key Takeaways

- AI has the potential to transform many aspects of the court system in the years to come. Although not yet ubiquitous, AI-enabled tools are already being used in various applications relevant to the court system.
- AI-enabled tools may address pressing needs within the court system—including managing staffing and resources, processing digital information, improving court operations, managing cases, maintaining accountability, and creating partnerships and collaboration.
- AI systems that provide recommendations or predictions in the context of the court system should be approached with caution and evaluated carefully.
- Deploying AI-enabled tools effectively requires investing in a strategy for the operational, procedural, and change management efforts required for successful implementation.

The courts play a critical role in the criminal justice system in ensuring the fair and impartial administration of justice for all. As AI becomes more prevalent across society, many criminal justice leaders are asking if AI-enabled technologies can help improve the court system. In other industries, AI has dramatically increased efficiency, expanded capabilities, and automated repetitive or mundane tasks. In the years ahead, AI will likely impact many aspects of the court system, including the prosecution and defense of crimes and the practice of law in both private and public service settings. This brief (1) offers mental models for leaders in the criminal court system to use when evaluating AI applications, (2) presents example AI applications and use cases, and (3) highlights key risk considerations within the criminal courts context.

This document explores AI within the criminal court system.

Additional briefs address specific application areas.

Figure 1: Implementing AI impacts all stakeholders in the criminal justice community. Briefs in this series frame AI within the community and focus on AI applications in law enforcement, criminal courts, and corrections.

As the various actors in the criminal court system work towards justice, they face a growing set of challenges specific to their roles. For example, prosecutors and defense attorneys must contend with the rapidly growing bodies of evidence generated through modern technology while complying with a growing set of standards, such as those outlined in *Brady and Giglio*.[1] In addition, prosecutors and state-appointed public defenders in many states may face higher caseloads and lower salaries than attorneys in other settings. These challenges and others are causing many states to have difficulty finding and retaining new talent.[2] This brief highlights examples of how AI can address these and other needs.

Court Needs that AI Might Address

Whereas the first brief in this four-part series explores the current state of AI within the criminal justice system broadly, this brief discusses AI's potential to address specific challenges that criminal courts face. Many of these challenges were identified from NIJ's Priority Criminal Justice Needs Initiative and the NIJ's Courts Strategic Research Plan 2020–2024 as illustrated in **Figure 2**.[3, 4]

Court Needs	Example Criminal Court Challenges
Managing Workforce Staffing and Resources	Adequate staffing and recruitment, specialized staff, training, retention, and locality (urban versus rural)
Improving Court Operations	Information-sharing, victim witness or juror management, facilities management, security, cybersecurity, resource allocation, and language translation
Processing and Managing Digital Information	Data volume, redaction, transcription, data storage, data management, data ownership with third-party data, data transparency, and data quality
Improving Case Management and Outcomes	Evidence management, case law, witness and community engagement, multimedia, plea bargaining, risk assessments, pretrial legislation, and sentencing guidelines
Maintaining Accountability	Brady and Giglio issues, data management, and wrongful conviction
Creating Partnerships and Collaboration	Technology development, ethical alignment, and information-sharing

Figure 2: Criminal court needs and challenges were identified through NIJ sponsored workshops and working groups with practitioners.

1. U.S. Department of Justice. (2020). 9-5000: Issues related to trials and other court proceedings. Retrieved from https://www.justice.gov/jm/jm-9-5000-issues-related-trials-and-other-court-proceedings
2. Lawrence, D. S., Gourdet, C., Banks, D., Planty, M. G., Woods, D., & Jackson, B. A. (2019). Prosecutor priorities, challenges, and solutions. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2892.html
3. Lawrence, D. S., Gourdet, C., Banks, D., Planty, M. G., Woods, D., & Jackson, B. A. (2019). *Prosecutor priorities, challenges, and solutions.* Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2892.html
4. National Institute of Justice. (2020). Courts Strategic Research Plan 2020–2024. (NCJ Number: 254684). Washington, DC: U.S. Department of Justice. Retrieved from https://nij.ojp.gov/library/publications/courts-strategic-research-plan-2020-2024

An Introduction to AI

Defining Key Terms

AI can be broadly understood as a computer science domain that encompasses a wide range of technologies that seek to mimic human intelligence. There are several different approaches to creating AI, and each has its strengths and limitations. Recently, the explosion of available data combined with advances in machine learning and computing hardware have paved the way for new AI applications and capabilities.

Improved AI algorithms have led to dramatic improvements in **machine vision, natural language processing, robotic process automation, and predictive analytics**. Broadly speaking, today's AI systems are much better at recognizing patterns in data—including video/image data, text data, and numerical data—and using those patterns to classify objects or make predictions.

Considerations for AI Success

AI has advanced in recent years; however, AI still has many technical and operational limitations. Data quality and availability pose two of the biggest challenges to developing new AI applications. AI-generated predictions and classifications depend on the data that are used to inform them, so AI outcomes will also reflect any data-related limitations (e.g., missing data, unusable data, improperly stored data, or biased data). The process of developing (also known as training) new AI systems often requires thousands of high-quality labeled examples for the algorithm to learn from. Gathering, cleaning, and labeling data can be a time-intensive and expensive process. In addition, implementing AI systems often requires process or behavioral changes that can be difficult or that can cause resistance from ecosystem participants.

Even in the absence of technical or operational limitations, many AI applications raise **ethical issues** such as **fairness, transparency, accountability, privacy, and security.** These concerns are particularly important for prosecutors and other officers of the court because the fair and equitable pursuit of justice is a top priority.[5] The first brief in this series includes a list of key ethical questions that can serve as a starting point for criminal justice leaders and decision-makers as they evaluate potential impacts of AI solutions on the community and other stakeholders.

A Design Thinking Approach to Identifying Use Cases

We advocate that all members of the criminal justice system take a **design thinking** approach to AI. Design thinking is an approach to innovation that emphasizes deep understanding of the problem, its context, and constraints before determining the best solution.[6] When considering if and how AI might benefit prosecutors, a design thinking approach begins with the question, **"What is the problem to be solved or the job to be done?"** For example, implementing fair and just plea-bargaining strategies was identified as a challenge to improving case management and outcomes in criminal cases (see **Figure 2**). To address this challenge, a design thinking approach would define the goals of plea bargaining, the tools currently in use, and the challenges to achieving those goals. This approach would first identify what the needs are for implementing fair, just plea-bargaining strategies and then assess the viability of an array of potential solutions, including AI, to address those needs.

5. A full review of the ethical implications that criminal justice leaders should consider before implementing AI is beyond the scope of this brief. For a more complete review of ethical AI development, see *IEEE's Ethically Aligned Design: A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems, First Edition*, and the AI Now Institute, an interdisciplinary research center focused on understanding the social implications of AI. Both are included in the references at the end of this document.

6. Linke, R. (2017) *Design thinking, explained.* Retrieved from https://mitsloan.mit.edu/ideas-made-to-matter/design-thinking-explained

Most jobs that benefit from AI fall into one of two categories: **performing tasks or making decisions.** Only once the context of the problem is well defined should prosecutors move on to the second question, "What is the best solution for this problem?" In the case of AI, this question can be reframed as, "Is AI the best solution? If so, **what level of automation is appropriate?"** Figure 3 provides examples of applications that help the criminal justice system perform tasks or make decisions with differing levels of AI involvement.

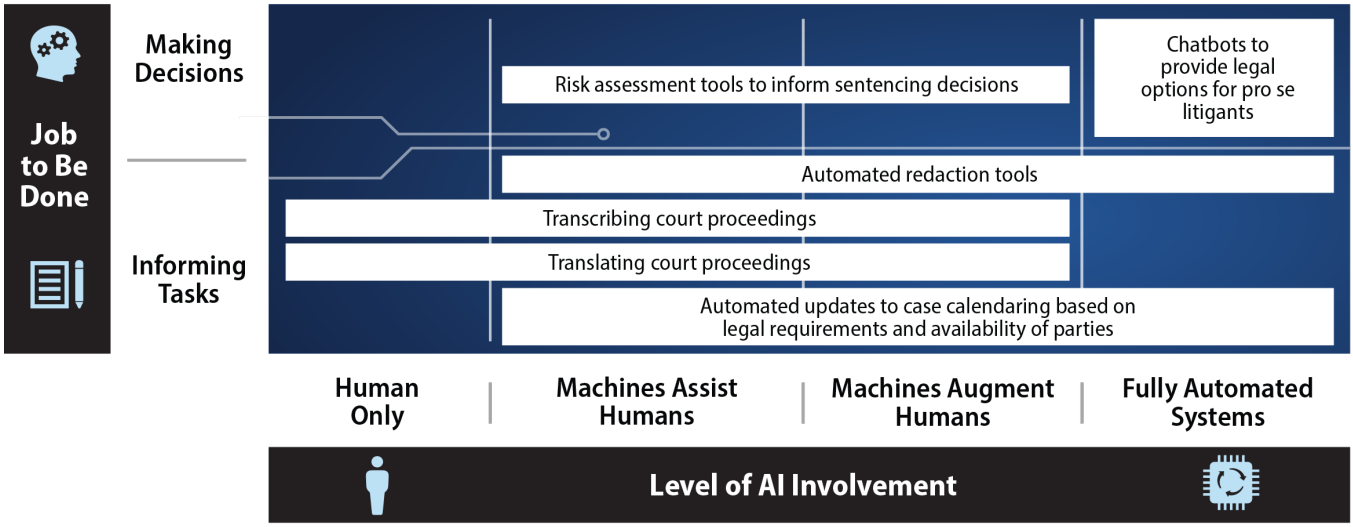

Figure 3: Design thinking can help identify AI use cases by considering the level of AI involvement in the job that needs to be done.

A deeper discussion of key terms, considerations for success, and design thinking can be found in the first brief of this series.

"The world is increasingly complex and full of data, and we have reached a point where there aren't enough humans to sort through the data and make the complex simple. AI provides us with the critical capabilities needed to handle this big, complex world and to achieve an intelligence advantage."

—Dr. Stacey Dixon, Director, Intelligence Advanced Research Projects Activity[15]

Opportunities and Examples of AI Addressing Prosecutor Needs

In 2019, RTI International—together with the RAND Corporation—published a report outlining the priority challenges and needs of prosecutors and district attorneys.[7] In addition, NIJ published strategic research priorities for the court system in April 2020.[8] The needs outlined in these documents serve as an excellent starting point for analyzing opportunities for AI-enabled technology, as previously shown in **Figure 2**. Highlighting the examples that follow does not mean that they (1) will be successful or (2) have been implemented ethically or cost effectively. Rather, these examples are being highlighting to show new approaches that are being developed and tested. Awareness of emerging technologies and products, as well as vendors, might enable future monitoring and adoption by the criminal court community.[9]

Managing Staffing and Resources

Although many of the challenges and needs related to staffing within the criminal courts are unique, the difficulties of finding qualified talent are not. Other industries are currently using AI to increase the efficiency of finding, validating, and hiring qualified candidates.[10, 11] These staffing applications raise important concerns about AI introducing negative bias in hiring, but some people argue that AI can eliminate bias in the hiring process.[12] Others point to AI's ability to increase diversity in certain professions,[13] a need that has been identified through the NIJ's Priority Criminal Justice Needs Initiative as relevant to the prosecutorial field.

Beyond hiring, resource constraints and the demands of the profession are two possible causes of high turnover. AI may be able to increase efficiency of certain mundane or repetitive prosecutorial operations, freeing up needed resources for higher-value activities. Many corporate law firms are using AI to automate these more mundane tasks. For example, corporate counsel at JPMorgan Chase automated parts of their contract review tasks and saved more than 360,000 hours of lawyers' time.[14]

7. Lawrence, D. S., Gourdet, C., Banks, D., Planty, M. G., Woods, D., & Jackson, B. A. (2019). *Prosecutor priorities, challenges, and solutions.* Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2892.html
8. National Institute of Justice. (2020). Courts Strategic Research Plan 2020–2024. (NCJ Number: 254684). Washington, DC: U.S. Department of Justice. Retrieved from https://nij.ojp.gov/library/publications/courts-strategic-research-plan-2020-2024
9. Example products and vendor technologies are provided to serve as illustrative examples only. The Criminal Justice Testing and Evaluation Consortium does not endorse any specific product or vendor. Mentions of companies and/or products do not represent approval or endorsement by the National Institute of Justice.
10. Heilweil, R. (2019). Artificial intelligence will help determine if you get your next job. *Vox*. Retrieved from https://www.vox.com/recode/2019/12/12/20993665/artificial-intelligence-ai-job-screen
11. Kasperkevic, J. (2019). Can AI make hiring fairer and more efficient? *Marketplace*. Retrieved from https://www.marketplace.org/2019/08/14/can-ai-make-hiring-fairer-and-more-efficient/
12. Polli, L. (2019). Using AI to eliminate bias from hiring. *Harvard Business Review*. Retrieved from https://hbr.org/2019/10/using-ai-to-eliminate-bias-from-hiring
13. Fisher, A. (2019) A.I. for hire: 4 ways algorithms can boost diversity in hiring. *Fortune*. Retrieved from https://fortune.com/2019/06/01/ai-artificial-intelligence-diversity-hiring/
14. Son, H. (2017). JPMorgan software does in seconds what took lawyers 360,000 hours. Bloomberg. Retrieved from https://www.bloomberg.com/news/articles/2017-02-28/jpmorgan-marshals-an-army-of-developers-to-automate-high-finance
15. "AI for American Innovation." (n.d.). https://www.whitehouse.gov/ai/ai-american-innovation/

Improving Court Operations

Court operations include docket management, scheduling, security and cyber-security, facilities management, evidence management, witness and juror management, and more. AI and other digital technologies have the potential to improve court operations in numerous ways. Robotic process automation (RPA) can be used to automate routine tasks or improve operational outcomes. Software vendors like eCourtDate are attempting to improve operational efficiency and user-convenience by providing SMS based reminders about court dates, payment notifications, and victim notifications.[16] AI powered language translation may help expand the availability of interpreter services in courts settings. In March 2020, Google Translate released its first publicly available real-time transcription feature for Android users. Google's mobile app records speech in one language and transcribes translated text in real time.[17]

While AI adoption for improved court operations is still nascent within the US, other countries are exploring digitally-enabled courts. In China, some court proceedings have even gone fully virtual, with a "'mobile court' offered on popular social media platform WeChat that has already handled more than 3 million legal cases or other judicial procedures since its launch in March 2019, according to the Supreme People's Court…In a demonstration, authorities showed how the Hangzhou Internet Court operates, featuring an online interface in which litigants appear by video chat while an AI judge—complete with on-screen avatar—prompts them to present their cases…Cases that are handled at the Hangzhou court include online trade disputes, copyright cases and e-commerce product liability claims."[18]

Processing and Managing Digital Information

The management and processing of digital information is where AI may have the most to offer the court system in the near term. As the amount of digital information grows—driven by social media, body worn cameras, and other digital devices—the sheer volume of digital evidence is growing rapidly. Since the 2012 Monique Da Silva Moore, et al. v. Publicis Groupe decision that allows for the use of technology-assisted review,[19] e-discovery technologies have been created to help attorneys sift through vast amounts of electronic data to find data that may be relevant to a particular case. AI is improving these e-discovery tools and may be able to help attorneys manage the increasing volume of case information.

Two mundane and time-consuming tasks that reviewers engage in are video redaction and audio transcription. Advances in machine vision and natural language processing have improved software that automates video redaction or transcribes audio files. These tools have expedited the law enforcement reporting process, speeding up the review for criminal court cases. (See the second brief in this series for additional details.) Although such applications still require human review prior to public release, these AI-enabled solutions will likely continue to improve as AI technologies continue to evolve.

Data management and data quality form the foundation of successful AI implementations. AI should not be seen as a tool to enable data management. Instead, good data management practices should be viewed as prerequisites to creating internal systems that use AI. Given the data challenges outlined in the NIJ's priority needs assessment—along with the variability in technology infrastructure that exists in the court system at large[20]— organizational data issues are likely to be a big barrier to AI adoption in many settings.

16. eCourtDate. (2020). Everyone Needs a Reminder. Court date reminders, victim notifications, case alerts, payment notices. Washington, DC: eCourtDate. Retrieved from https://ecourtdate.com/
17. Statt, N. (2020, March 17). Google Translate's real time transcription feature is out now for Android. The Verge. Retrieved from https://www.theverge.com/2020/3/17/21182640/google-translate-transcription-android-feature-real-time-ai
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19. Verga, M. (2018, July 31). In the beginning was da Silva Moore (Technology-assisted Review Series, 2). XACT Data Discovery. Retrieved from https://www.xactdatadiscovery.com/articles/in-the-beginning-was-da-silva-moore/
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Improving Case Management and Outcomes

Case management includes evidence management, analyzing case law, witness and community engagement, multimedia, plea bargaining, risk assessments, pretrial legislation, sentencing guidelines, and more. One way that AI is improving case management is increasing the efficiency of legal research. As natural language processing improves, software tools will become increasingly sophisticated in their ability to assist with legal research. Major legal support software vendors are already advertising that their products are AI-enabled, increasing the efficiency with which prosecutors can conduct legal research or find relevant case law.[21, 22]

Additionally, AI may help inform litigation strategies. Decisions about how to proceed after charges are filed are some of the most important and consequential determinations that a prosecutor makes. Such decisions often rely on attorneys weighing available evidence alongside their own experience. Although still a nascent application, AI may one day be used to predict trial outcomes based on available evidence and inform prosecutorial decision-making and strategy development. For example, some academics have used machine learning and predictive analytics to predict outcomes in court decisions, including decisions for the European Court of Human Rights[23] and the Supreme Court of the United States.[24]

Lastly, risk assessment tools are becoming more prevalent in courtrooms across the US.[25] Proponents of these systems highlight the potential to reduce human bias in decision-making.[26] Detractors point to instances in which such systems have perpetuated the systemic bias embedded in data used to create these systems.[27] An in-depth discussion of risk assessment tools is beyond the scope of this brief. However, prosecutors and public defenders should continue to have ongoing conversations that will ultimately determine if and how these systems are used. For further reading about risk assessment tools, see *Handbook of Recidivism Risk/Needs Assessment Tools, First Edition*,[28] and *Report on Algorithmic Risk Assessment Tools in the U.S. Criminal Justice System*.[29]

It is widely accepted that human decision-making is imperfect. Sometimes this is due to incomplete information or lack of critical insights. Other times, this is due to human bias or errors in judgment. Anyone deploying AI systems to make decisions or recommendations must wrestle with the question: Is perfect decision-making a prerequisite to deployment? Or is improvement over existing alternatives sufficient?

21. Announcing Westlaw Edge. (n.d.). Retrieved from https://legal.thomsonreuters.com/en/insights/articles/announcing-westlaw-edge
22. 2020 legal analytics study: Bringing value into focus. (n.d.). Retrieved from https://www.lexisnexis.com/en-us/products/lexis-analytics.page
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Maintaining Accountability

Requirements related to *Brady and Giglio*, data management procedures, and pressures from conviction integrity units create needs related to maintaining accountability. Some district attorneys are finding creative ways to use AI to try to improve accountability. The San Francisco District Attorney is using AI redaction software in an attempt to eliminate bias in decisions about who to prosecute. Prosecutors use an AI-enabled "bias mitigation" tool developed at Stanford to "automatically redact information from police reports that could identify a suspect's race. [The tool] is designed to be a way to keep prosecutors from being influenced by racial bias when deciding whether and how someone gets charged with a crime…The tool will not only strip out descriptions of race, but also descriptors like eye color and hair color, according to the district attorney's office. The names of people, locations, and neighborhoods that might all consciously or unconsciously tip off a prosecutor that a suspect is of a certain racial background are also removed."[30]

Addressing the needs of prosecutors could contribute to improving the efficiency, legitimacy, and administration of justice within prosecutors' offices and the criminal justice system, as well as in the eyes of the victims and the community.[31]

Creating Partnerships and Collaboration

Criminal courts leaders can benefit from partnering and collaborating with others on the development and implementation of AI tools. Those looking to deploy AI may partner with data scientists, researchers, and other partners to support AI adoption in criminal court functions, as appropriate. These partners can help translate information from one system to another, code information to train AI algorithms, work to examine AI implications, and help determine whether AI systems can truly support efficiencies while also maintaining fair and individualized justice. Partnerships may also help create value from the massive amount of information that prosecutors and courts maintain. Partners and collaborators can help answer some persistent questions that can promote public transparency, such as determining if there is consistent decision-making within and across jurisdictions or understanding the number and characteristics of cases that are disposed via plea bargains versus those that go to trial.[32]

30. Hollister, S. (2019). San Francisco says it will use AI to reduce bias when charging people with crimes. The Verge. Retrieved from https://www.theverge.com/2019/6/12/18663093/ai-sf-district-attorney-police-bias-race-charge-crime
31. Lawrence, D. S., Gourdet, C., Banks, D., Planty, M. G., Woods, D., & Jackson, B. A. (2019). *Prosecutor priorities, challenges, and solutions.* Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2892.html
32. National Research Council 2001. What's Changing in Prosecution?: Report of a Workshop. Washington, DC: The National Academies Press. https://doi.org/10.17226/10114.

Beyond needs identified through the Priority Criminal Justice Needs Initiative, there are other noteworthy examples of AI being applied within the court system.

Assisting individual citizens and pro-se litigants

A 2016 report highlighted the increasing number of pro-se litigants who may need help navigating the legal system.[33] AI-enabled legal recommendation services could help these self-represented litigants navigate the legal system. Systems such as virtual legal chatbots and legal recommendation software may help create more equitable access to legal services—especially with instances in which knowledge gaps exist. Some organizations are going one step further and assisting citizens that don't even know they are eligible for assistance. Code for America is developing an AI application for expungement. They are working with the internal databases of California courts to automatically identify expungement-eligible records, which eliminates the need for individuals to apply.[34] A United Kingdom-based company created a legal assistance app called DoNotPay that helped overturn 160,000 parking tickets in London and New York City.[35]

Detecting digital evidence tampering

AI has enabled new forms of video manipulation, which raises issues during litigation. AI-enabled "deepfakes" or other doctored videos and photos can be difficult to detect. AI researchers, including those at Google, are working to detect evidence of tampering or doctoring of digital images.[36] Such technology may help authenticate digital evidence as "undoctored." However, some experts worry that detection technology will never be able to keep pace with deepfake technology.[37]

Recommending asset split in a divorce

The Federal Court of Australia has created a machine learning proof of concept that helps parties in divorce cases divide assets and liabilities.[38] The system is an example of AI assisting, rather than replacing, human decision-making because the system's recommendations are nonbinding and are simply a tool used during negotiations.

Informing judicial decisions

In addition to using AI in risk assessment and other prediction tools, AI can also be used to identify what data are likely most useful to inform a judicial decision, pull that relevant data from identified sources, and aggregate the information into a "snapshot" or dashboard to inform judicial decision-making. This approach differs from more traditional data dashboards that display information in the same way for each case. A juvenile court judge in Ohio used AI technology to analyze data for juvenile offenders and to create a multipage summary for each offender.[39] In Buenos Aires, the AI startup Prometea is used to draft legal documents and suggest rulings to judges. The country of Estonia has even more ambitious plans and is attempting to create an "AI Judge" to fully automate judicial decision-making for certain small claims cases.[40]

33. Jackson, B. A., Banks, D., Hollywood, J. S., Woods, D., Royal, A., Woodson, P. W., & Johnson, N. J. (2016). Fostering innovation in the U.S. court system: Identifying high-priority technology and other needs for improving court operations and outcomes. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR1255.html
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Five AI Considerations for Criminal Courts

1. The use of AI is not yet widespread in criminal courts. However, AI implementations are increasing, and new applications are emerging. AI is likely to transform many aspects of the legal profession in the years to come.
2. A design thinking approach can help prosecutors and other officers of the court identify AI use cases. First, assess the jobs to be done and identify problems of practice. Then, look at various technologies, including AI, to identify the best solutions. Court system leaders can mitigate AI risks by carefully considering the impacts of bias in AI systems that provide recommendations or predictions.
3. Prosecutors and other officers of the court may decide to pursue lower-risk applications in the near term as society wrestles with the larger implications of algorithmic decision-making; prosecutors may take this approach because of concerns about fairness and transparency. Examples include improvements to operational efficiency rather than higher-risk applications that make recommendations or decisions.
4. Implementation may require substantial process or procedural changes, regardless of the technical readiness of AI systems. Deploying AI-enabled technology will succeed only if implementers are given sufficient time and resources.
5. Early adopters in other law disciplines (e.g., corporate law) and even other professions (e.g., finance or health care) can serve as bellwethers for the costs, benefits, and risks of implementing AI systems.

Future Outlook

AI is here to stay, and advances in technical capabilities will continue. The criminal justice community faces shrinking budgets and a growing sense of mistrust from the community. With these things in mind—and considering ethical appropriateness, technical feasibility, and the operational limitations—AI provides important opportunities to improve the criminal justice system. Opportunities to implement AI tools should be met with a clear understanding of the data requirement and use a design thinking approach to evaluating potential use cases. This series of briefs aims to inform decision makers about what is already happening in the criminal justice ecosystem and what is required to utilize emerging AI technologies in a thoughtful, informed, and unbiased way.

The NIJ continues to support a portfolio of AI research projects in areas such as public safety video and image analysis, DNA analysis, gunshot detection, and crime forecasting.[41] Looking ahead to the future, different countries and states are likely to adopt AI technologies for criminal justice applications at different rates, which presents an opportunity for learning through collaboration. Improving criminal justice outcomes through the use of AI-enabled technologies will require intentional investment, careful consideration, and sustained efforts from criminal justice decision makers. If designed and implemented well, AI-enabled tools have the potential to improve efficiency, reduce costs, and expand capabilities across many criminal justice use cases.

41. Christopher Rigano, "Using Artificial Intelligence to Address Criminal Justice Needs," October 8, 2018, nij.ojp.gov: https://nij.ojp.gov/topics/articles/using-artificial-intelligence-address-criminal-justice-needs

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