Center for Justice Innovation

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# AI Data and Research Services at the Center for Justice Innovation

Our Data Analytics and Applied Research Department supports organizations throughout their AI journey, from strategic planning and design—what do you want to use AI *for*?—through testing and evaluating outcomes. We work to build long-term data capacity, prepare data for use by AI, assist with implementation, and conduct research to test model validity over the long haul.

## Building Data Capacity

Accurate and comprehensive data is essential for any use of AI. We provide technical assistance and support by reviewing data sources, improving data infrastructure, and developing a plan to prepare your data for use by AI. Specific activities include:

- Logic modeling to formalize theories of change that will guide data infrastructure and tracking.
    - Reviewing data systems to identify gaps between logic model(s) and current data-tracking.
    - Developing data-tracking of performance indicators based on logic model(s).
- Reviewing available data sources and infrastructure to understand the state of the available data.
    - Assessing data systems and infrastructure for data quality, completeness, and fidelity to the program model.
        - Where incomplete or missing data has been identified, developing plans to improve data quality.
    - Developing a data inventory for all available data sources including: how data is captured/recorded, by whom, and its format; how accessible data is and by whom; its shelf life

(how often it's updated); and any context-specific knowledge about the data itself that can contribute to its interpretation.

- Leveraging all internal and external data sources for use by AI.
    - Identifying areas where the accuracy of data-collection can be improved by AI (e.g., reading in PDFs or other non-standardized information for improved data-entry).
    - Processing and cleaning data for comprehensiveness and greater accuracy and reliability.
    - Assisting in preparing external or internal data sources that may not have been previously leveraged (e.g., PDFs, images, audio files, text).

## Strategic Planning

Taking stock of and preparing the available data for AI use is the first step, but before jumping into deploying an AI application, strategic planning is imperative to determining what problem(s) you want AI to address. It's also critical that the elected officials, system practitioners, researchers, etc., advocating for and implementing these tools understand how they work and the stakes associated with deploying them in the justice sector. In other words, are you hearing from the right voices—beginning with the directly-impacted—and do you have the right culture in place for AI to be successful?

Strategic planning helps to avoid these and other implementation challenges; mitigate the risks related to data quality, model reliability, and the reliability of AI-generated output; and establish clear criteria for evaluating AI performance. Specific activities include:

- Reviewing program documents, operational processes, and available data to and develop a plan where AI can be used effectively and thoughtfully.
- Designing AI use in a step-by-step approach, beginning with a well-defined, lower-complexity application that can be supported by existing data structures and systems and readily validated and reviewed.
- Determining who needs to be involved in planning and implementation and facilitating conversations among all of the parties.
    - Ensuring conversations encompass data protection and security, bringing together data, technology, and program/operational teams.
- Assessing organizational responses to AI use through the development and administration of staff surveys that can cover a range of topics: general perceptions of AI and concerns about its use, deploying AI at the specific organization, and barriers to using AI.

## From Testing to Implementation

Once data is prepared and a rollout plan is in place, additional work must occur to ensure ongoing data quality and mitigate risks related to model accuracy. Often referred to as AI governance, we collaborate with organizations on plans to guide, evaluate, and oversee AI through its lifecycle by performing the following activities:

- Evaluating model accuracy using available data by comparing AI-generated outputs with results produced through human-led workflows.
    - Performing data-quality checks for trustworthiness, consistency, and validity.
- Reviewing AI design plans to ensure operational fitness, i.e., that the AI application aligns with codified standards of the organization and the system infrastructure required for the organization to operate.
    - Designing plans for post-implementation monitoring, including the ongoing review of data validity and reliability.
    - Reviewing AI model trustworthiness—including mechanisms to identify false positives or negatives—and establishing when outcomes produced by the model have deviated beyond a pre-determined threshold to trigger additional human review.
    - Developing a protocol for overriding or challenging decisions made by AI when the system diverges from formal organizational standards.

## Post-Implementation of AI

Once AI applications have been implemented, we support organizations in their ongoing review of data and outcomes produced by AI models and in developing research plans to continue to test models. Specific activities include:

- Performing robustness checks for trustworthiness, consistency, and validity of the AI model(s).
- Identifying potential research designs and conducting research on AI use.
    - Process assessment of AI—was it implemented as planned?
    - Testing the efficiency and usefulness of AI, comparing outputs from AI models with traditional workflow processes in place before AI.
- Assessing the acceptance of AI by users via the design and administration of surveys to gather overall perceptions and identify both the strengths and challenges of the use of AI.

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**FOR MORE INFORMATION**

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