TOPIC: **ETHICAL USE OF AI IN CRIMINAL JUSTICE**

Medium: **Info graphs and art**

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AT CONSCIENCE' CALL—*continued.*

Of course, the "Automatic Conscience Clearer" for minor offences would soon be immensely popular. We beg to offer the above suggestion. N.B.—The inventor has been provisionally protected.

INTRODUCTION: The application of artificial intelligence (AI) in the criminal justice system is growing in frequency as it develops. Artificial Intelligence is being utilised to automate a number of criminal justice system functions, including facial recognition and predictive policing. Although AI has the potential to increase the criminal justice system's efficiency and accuracy, its application presents significant ethical questions.

How can AI be used in the field of criminal justice?

AI has the potential to transform the criminal justice system by automating jobs, increasing efficiency, and offering data-driven insights. However, in order to prevent increasing prejudices and ensure justice, AI must be implemented professionally and ethically.

Predictive policing: AI systems are able to identify regions with a high risk of crime in the future by analysing demographic data, social media trends, and past crime data. Allocating resources and police patrols can be informed by this information.
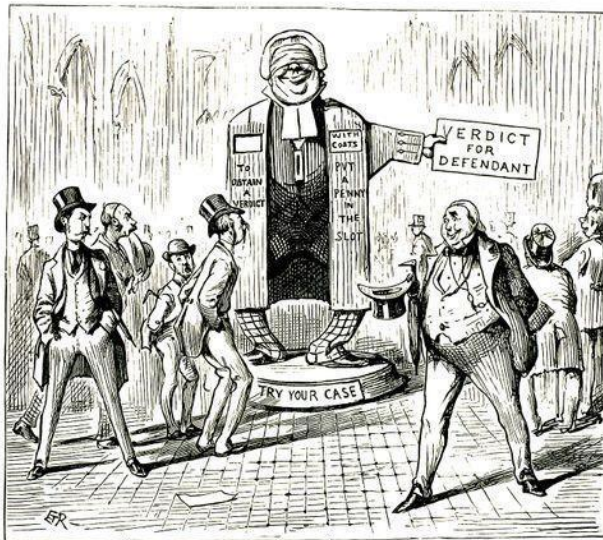
AUTOMATIC ARBITRATION.
NO MORE EXORBITANT FEES! NO MORE LAW! NO MORE TRIALS!

Fraud Detection: Artificial intelligence (AI) systems are able to examine online activity, account activity, and financial transactions in order to identify irregularities and possible fraud patterns. This helps to stop financial crimes.

Risk Assessment: AI systems can evaluate an offender's likelihood of violence and recidivism, which is useful in making judgements about bail, recommended sentences, and parole eligibility.

Contract Review and Analysis: AI is capable of examining contracts to find possible legal problems, like contradictions, ambiguities, or inconsistencies with the law. This can assist solicitors in negotiating more advantageous agreements and advising their clients about the possible advantages and disadvantages of various contract arrangements

The world's FIRST fully automated divorce lawyer.

Let's Look at different dimensions of ethics that are involved:
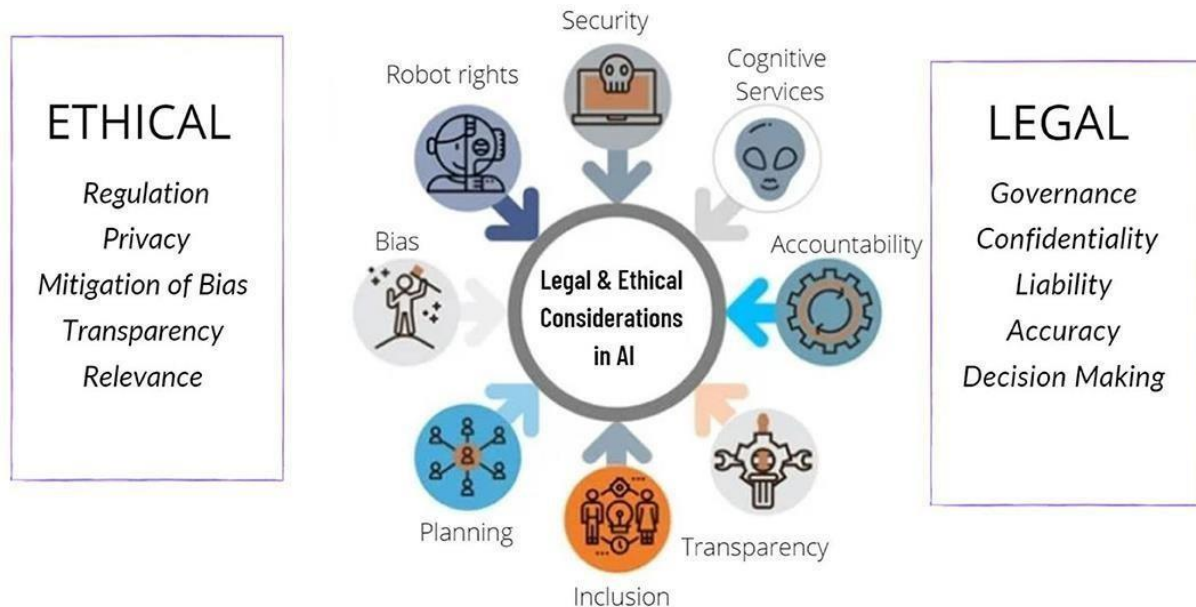
One of the biggest concerns is the potential for bias. Artificial intelligence carries the potential of sustaining preexisting biases and discriminatory practices because its algorithm is only as good as the data it is trained on. This has the potential for continuing inequalities in the criminal justice system and results in unfair outcomes for marginalized communities.

Another concern is the lack of transparency in how AI systems make decisions. It might be hard for people to understand how a machine learning algorithm came to a certain conclusion, which makes it harder to spot and fix biases or mistakes.
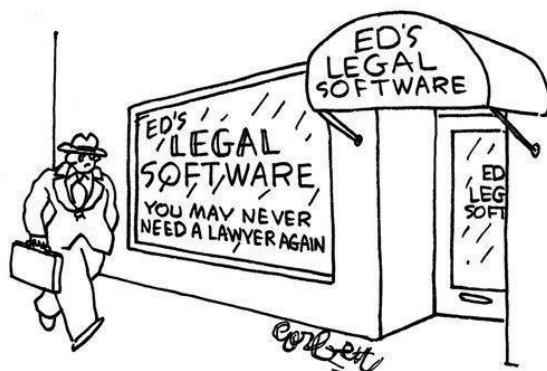

Finally, there are concerns about privacy and surveillance. Concerns over the right to privacy and the potential of misuse by law enforcement authorities are brought up by the usage of face recognition and other AI-powered surveillance technology

BIAS IN AI

What is AI Bias?

AI bias is the occurrence of unfair and discriminating outcomes in artificial intelligence systems, which is frequently caused by biased data or design and training methods. It can lead to algorithms making judgments that favor or punish particular groups disproportionately, maintaining and magnifying existing social prejudices.
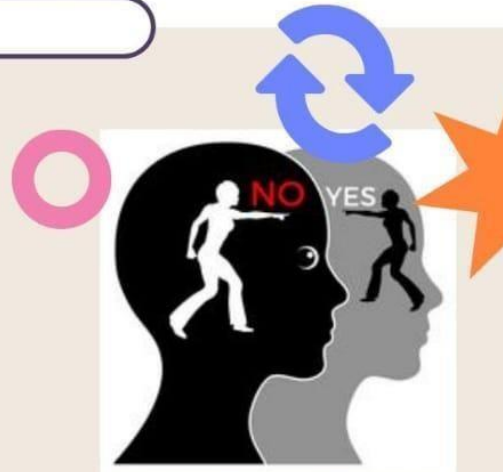
Classifications

DATA BIAS

ALGORITHM BIAS

HUMAN BIAS

- Since AI systems learn on data, they will also be biased if the data is biased.

- For instance, if an AI system is used to forecast the likelihood of recidivism and the training data is skewed against particular demographic groups, the system will be more likely to anticipate that those demographic groups will commit crimes again.

- The design of AI systems may also give rise to bias.

- For example an algorithm that assigns a 0.5 weight to criminal history and a 0.5 weight to race, will inadvertently consider race when making decisions, even if this was not the goal of the system's inventors.

- Human bias can also influence AI systems.

- AI systems may mirror the prejudices of the individuals who create, develop, and implement them if they are biased.
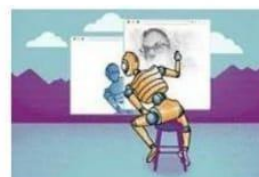
EFFECTS OF BIAS IN AI

Potential problems of bias in AI include discrimination against women, people of color, the working class, and those with disabilities. These systems may exacerbate unfair targeting or profiling by the police, underrepresent certain demographics in clinical drug trials, or overlook qualified candidates for hiring opportunities. Here's a closer look at some consequences of biased AI results in three industries.

CRIMINAL JUSTICE

AI has the potential to heavily impact the criminal justice system due to its ability to process reams of data. Here are some positive applications and negative outcomes of AI's use in criminal justice:

Positive applications

» Monitoring closed-circuit TV (CCTV) for traffic accidents
» Scouring online activity for evidence of money laundering and human trafficking
» Analyzing forensic data
» Comparing DNA results to help solve cold cases
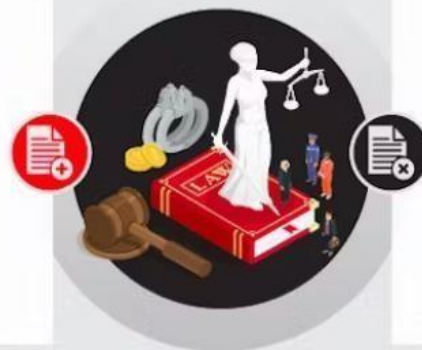
Negative outcomes

» Delivering poor facial recognition results for nonmale and nonwhite populations
» Increasing rates of pretrial incarceration for Black and low-income people
» Increasing geographical discrimination due to AI-based surveillance leading to higher arrest rates in the areas being surveilled

These prejudices may result in several negative consequences, such as:

Discriminatory Outcomes: AI systems have the potential to treat members of categories of people unfairly, such as racial minorities or those with impairments. Unfair results, including persons being denied parole or receiving lengthier prison sentences, may result from this.

Loss of faith in the criminal justice system: People are less likely to have faith in the criminal justice system if they think it is biased. Maintaining public order and ensuring that everyone is treated fairly may become more challenging a result.

Let's Look at Some Examples

COMPAS

COMPAS (Correctional Offender Management Profiling for Anti-Recidivism) is a risk assessment method used commonly in the United States to forecast the possibility of recidivism (reoffending) for individuals involved in the criminal justice system.

According to a 2016 ProPublica research, COMPAS was substantially more likely to mistakenly designate Black defendants as high risk for recidivism than white defendants. According to the report, COMPAS was "two times more likely to falsely flag black defendants as high risk than white defendants."

77% AI criminal justice systems may misclassify **black men as riskier than white men by up to 77%.**

40%

Northpointe's criminal justice ML systems **had a 40% recidivism risk error.**

56% Loss of Customer Trust

43% Increased Regulatory Scrutiny

50% Compromised Brand Reputation

37% Mismatch with Personal Ethics

42% Loss of Employee Trust

25% Lawsuits

HOW TO AVOID BIAS IN AI

Given AI's potential for improving hiring efficiency, health outcomes, and equitable justice, the existing potential for biases in AI needs to be eliminated, and steps must be taken to avoid introducing more.

Here are some methods to exclude bias:

1 Use training data that covers large, representative information.

2 Check systems over time to preclude learned bias.

3 Build consistent feedback and improvement procedures.

4 Focus on transparency so everyone understands how the AI system reaches its decisions.

5 Include checks and balances on humans to review their decisions and recommendations.

Transparency

Using artificial intelligence (AI) in the criminal justice system requires transparency. It means being transparent about the creation, use, and results of AI-powered instruments used in court cases. Since transparency promotes accountability and trust, it guarantees the ethical and responsible application of AI.

ETHICAL USE OF AI CRIMINAL JUSTICE

Why Transparency is Important?

Public Trust
When people are aware of AI's role in criminal justice, they are more likely to have faith in the system, which allays fears of prejudice and discrimination.

Better Decision Making
Transparency makes it possible to examine and assess AI systems, which promotes more informed decision-making.

Bias Mitigation
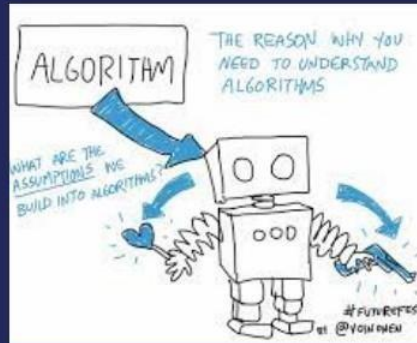Transparency makes it easier to recognise and lessen possible biases in AI systems.

Increased Correctness
By permitting inspection and error repair, transparency can increase the correctness of decisions made by AI.

What happens when there is lack of transparency ?

Lack of transparency in the application of artificial intelligence (AI) in criminal justice can have serious negative effects, including eroding public confidence, aggravating prejudices, and impeding accountability.

1.

Public Mistrust and Erosion of Legitimacy
The public becomes suspicious and distrustful of AI systems when their inner workings are kept a secret. People may come to believe that AI makes biased, arbitrary, or unfair conclusions, which would cause them to lose faith in the criminal justice system as a whole.

2.

Persistence of Biases
Large data sets used to train AI algorithms may reflect and magnify preexisting societal biases. Lack of transparency makes it more difficult to recognise and deal with these biases, which could lead to the continuation of biased results.

3.

Lack of Scrutiny and Accountability
In the absence of transparency, users, deployers, and developers of AI cannot be held responsible for their actions. This lack of examination may result in careless AI procedures and a failure to address possible risks.

4.
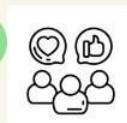
Reduced Engagement and Participation
When people feel like they are not being kept informed,they are less likely to be engaged and participate in decision-making processes.This can lead to apathy,disenfranchisement,and a decline in civic engagement.
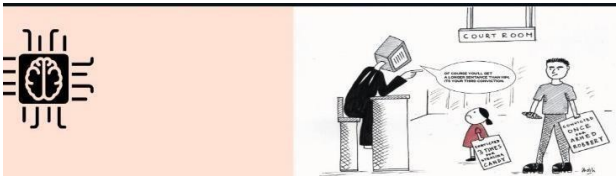
Accuracy..

Let's take two instances to compare accuracy...

Lawgeex is a legal technology business that specialises in contract review automation utilising artificial intelligence (AI). They utilise machine learning and natural language processing (NLP) tools to analyse contracts and detect legal risks, duties, and other relevant features.

AI VS LAWYERS !

AI VS LAWYERS
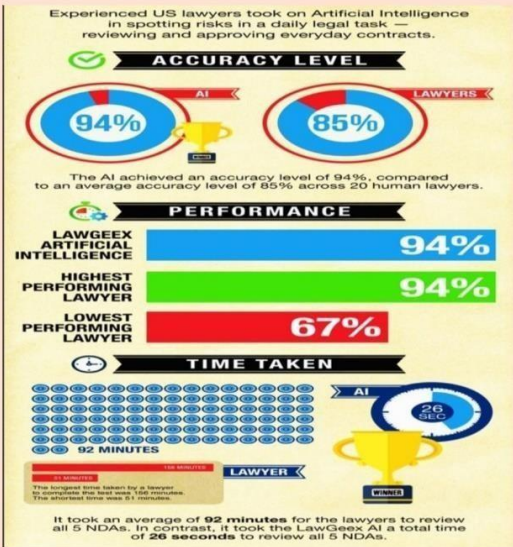**THE ULTIMATE SHOWDOWN**

97%
This was the success rate when Lawgeex was compared with a human lawyer.

When Lawgeex was used its accuracy in identifying legal risks and duties in contracts is stated to be 95%. This means that the platform accurately detects 95% of the risks and duties that would be identified by a human lawyer. This is a considerable improvement over typical contract review procedures, which can have as low as a 70% accuracy rate.

Contracts can be reviewed by the platform up to ten times faster than by human lawyers. This is due to the fact that Lawgeex's algorithms can process text far faster than human

Experienced US lawyers took on Artificial Intelligence in spotting risks in a daily legal task — reviewing and approving everyday contracts.

ACCURACY LEVEL

94% AI   **85%** LAWYERS

The AI achieved an accuracy level of 94%, compared to an average accuracy level of 85% across 20 human lawyers.

PERFORMANCE

LAWGEEX ARTIFICIAL INTELLIGENCE	94%
HIGHEST PERFORMING LAWYER	94%
LOWEST PERFORMING LAWYER	67%

TIME TAKEN

AI — 92 MINUTES
LAWYER — 26 SEC

It took an average of **92 minutes** for the lawyers to review all 5 NDAs. In contrast, it took the LawGeex AI a total time of **26 seconds** to review all 5 NDAs.

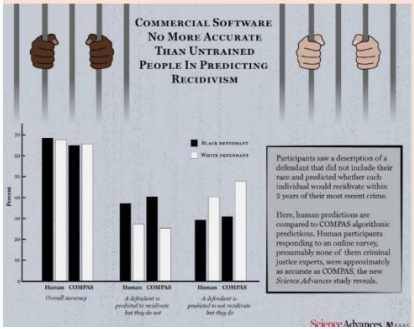**Moving on to our next example...**

COMPAS Recidivism Risk Assessment Tool
COMPAS (Correctional Offender Management Profiling for Anti-Recidivism) is a risk assessment method used commonly in the United States to forecast the possibility of recidivism (reoffending) for individuals involved in the criminal justice system. COMPAS, on the other hand, has been chastised for its inaccuracy and potential for prejudice.

According to a 2016 ProPublica research, COMPAS was substantially more likely to mistakenly designate Black defendants as high risk for recidivism than white defendants. According to the report, COMPAS was "two times more likely to falsely flag black defendants as high risk than white defendants."

65%
Compas's algorithm is only 65% accurate at predicting who will re-offend.

Another study, published in the Journal of Criminology and Public Policy in 2017, discovered that COMPAS was no more accurate than a basic formula that merely takes an individual's criminal history into account. According to the study's authors, COMPAS "does not add predictive value to traditional demographic and criminal history information."

COMMERCIAL SOFTWARE No More Accurate Than Untrained People In Predicting Recidivism

Participants saw a description of a defendant that did not include their race and predicted whether each individual would recidivate within 3 years of their most recent crime.

Here, human predictions are compared to COMPAS algorithmic predictions. Human participants responding to an online survey, presumably none of them criminal justice experts, were approximately as accurate as COMPAS, the new Science Advances study reveals.

Overall, it looks that Lawgeex is a more reliable and dependable instrument than COMPAS. The high precision of Lawgeex can save lawyers time and money while significantly lowering the danger of legal conflicts. COMPAS, on the other hand, has been chastised for its inaccuracy and bias.

However, this does not mean that AI should not be applied in criminal justice. AI has the ability to improve the criminal justice system's efficiency, consistency, and data-driven decision-making. However, it is critical to employ AI professionally and ethically, as well as to reduce the risk of prejudice and inaccuracy.

Accountability

Accountability in the use of artificial intelligence (AI) in criminal justice is a key problem that must be carefully considered and addressed. As AI systems become more integrated into various elements of the criminal justice system, clear rules and processes for responsible and ethical application are critical.

Should it be one organization or group of organizations or an individual ?

1 AI Developers and Designers

AI algorithm and system developers and designers have a large amount of responsibility for ensuring that their creations are fair, unbiased, and follow to ethical norms. To reduce the risk of harm, they should conduct rigors testing, auditing, and bias mitigation procedures.

Policymakers and Regulatory Services 2

Policymakers and regulatory agencies play an important role in setting clear norms, standards, and supervision systems for the use of AI in criminal justice. They should specify appropriate AI usage, protect individual rights, and hold parties accountable for noncompliance.

3 Human Decision-Makers

Human decision-makers who rely on AI recommendations or outputs must make informed and ethical choices.

Independent Oversight Bodies 4

Independent oversight bodies, such as commissions or ombudsmen, are critical in monitoring the use of artificial intelligence in criminal justice, investigating complaints, and holding stakeholders accountable. They should create a channel for redress and guarantee that AI decision-making is transparent.
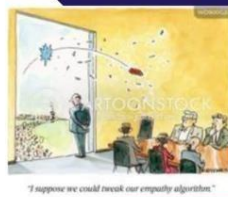
Summary

In summary, determining accountability in specific circumstances might require a thorough enquiry that takes into account the many players' responsibilities and actions. The ultimate goal is to create an accountability framework that encourages responsible and ethical AI use in criminal justice, safeguards individual rights, and ensures that AI assists the pursuit of justice.

Summary

AI in the Courthouse: Bright Ideas, Shadowy
Concerns

Imagine police guided by a crystal ball,
preventing crimes before they happen. That's
the promise of AI in criminal justice. From
predicting crime hotspots to analyzing evidence
like a super-sleuth, AI can be a powerful tool.
But like any powerful tool, it comes with risks.

Shining a Light:

· **Crime Prevention**: AI can analyze mountains
of data on past crimes to predict when and where
the next one might occur. Police can then focus
their patrols on these areas, potentially stopping
crimes before they start.

· **Faster Investigations**: AI can sift through
hours of footage from security cameras, quickly
identifying suspects or suspicious activity. It can
also analyze phone records and social media
posts, helping detectives connect the dots in
complex cases.

· **Fairer Decisions**: AI can help assess the risk
of someone re-offending.This can inform decisions
about bail, parole,and sentencing, potentially
keeping innocent people out of jail while
identifying those who truly need to be locked up.

Shadows Underfoot:

· **Bias in the Machine**: If the data AI is trained
on is biased, its conclusions will be too. Imagine
an AI unfairly targeting certain communities
based on their race or socioeconomic status.
This could lead to wrongful arrests and deepen
existing inequalities.

· **Secret Algorithms**: How does the AI actually
reach its conclusions? Often, these algorithms
are complex and opaque, making it hard to
understand why someone is flagged as high-risk
or a potential suspect. This lack of transparency
can erode trust in the justice system.

· **Big Brother Watching**: Extensive
surveillance powered by AI raises concerns
about privacy. Do we really want cameras
watching our every move, even if it's to prevent
crime?

Finding the Right Path:

To make AI a force for good in the
courtroom, we need to be careful. We
need to ensure that algorithms are fair
and unbiased, that decisions are
transparent, and that our right to privacy
is protected. Open discussions, clear
guidelines, and strong oversight are
crucial to ensure AI isn't just a fancy tool,
but a true champion of justice.

Citations:

- https://www.mastersinai.org/industries/criminal-justice/#:~:text=Today%2C%20AI%20allows%20forensic%20labs,evidence%20that%20even%20predates%20testing.

- https://www.science.org/doi/10.1126/sciadv.aao5580

- https://www.propublica.org/article/how-we-analyzed-the-compas-recidivism-algorithm

- https://medium.com/@futureaiweb/the-ethics-of-ai-in-criminal-justice-balancing-fairness-and-accuracy-317148533511#:~:text=To%20address%20the%20ethical%20implications%20of%20AI%20in%20criminal%20justice,decisions%20made%20by%20AI%20systems.
- https://towardsdatascience.com/ethical-concerns-of-combating-crimes-with-artificial-intelligence-surveillance-and-facial-a5eb7a09abb1
- https://ts2.space/en/the-ethics-of-ai-in-criminal-justice-and-law-enforcement/
- https://medium.com/bestai/the-ethical-implications-of-ai-in-criminal-justice-navigating-the-intersection-of-technology-and-ac24132f0eeb