Why India, with its huge backlog of unresolved cases, needs robo-judges

By Apoorv Agarwal

Indian judges in session
Herbert Simon in 1965 made an early prediction that "Machines will be capable, within 20 years, of doing any work a man can do". Not quite, not yet. This was far-fetched and overly optimistic for 1965, but for 2024 not so much.

AI in recent times has generated many promises and prophecies. From the startling incident of Russian President Vladimir Putin being questioned live by his very own AI 'Double' on the aspect of AI dangers to Punjab and Haryana High Court judge using AI (ChatGPT), post-human reasoning, to understand a wider perspective on the aspect of granting of bail when cruelty is involved (Jaswinder Singh v. State of Punjab), AI is the center of discussion.

AI, without an iota of doubt, has several potentials for streamlining the judicial system but does it have the potential to replace human judges? AI can process information and perform tasks much faster than humans. For example, AI algorithms can analyze large datasets, perform complex calculations, and execute repetitive tasks at speeds that far exceed human capabilities. However, whether integration of AI into the justice administration would be a robust and futuristic move considering the backlog of cases in India?

The judicial administration system in India is grappling with a formidable challenge, primarily stemming from the alarming judge-to-population ratio. With a sanctioned strength of 25,628 judges, these justice torchbearers find themselves overburdened by a staggering 43 million pending cases. The Niti Ayog Strategy paper, published five years ago painted a disconcerting picture, estimating a daunting 324 years to clear the existing backlog. As India approaches its centennial year of independence, the situation has only worsened, demanding urgent and innovative solutions.

One significant contributor to the backlog is the limited number of working days allocated to the various tiers of the judiciary. Currently, the Supreme Court of India operates for 193 days in a year, high courts for 210 days, and trial courts for 245 days. This restricted timeframe exacerbates the challenges of addressing the multitude of cases, leading to delays and a growing backlog.

Can AI alleviate judiciary's strain?

Artificial intelligence (AI) emerges as a promising solution to alleviate the strain on the Indian judiciary. AI's inherent independence from holidays and humanistic excuses positions it as a potent tool for addressing the efficiency and speed of the judicial process. Artificial

Intelligence including Machine Learning and Deep Learning are backboned by the data that is fed to them. The effectiveness of AI models is contingent upon the quality and quantity of the data they are trained on. More data not only enhances the model's performance but also contributes to its overall capabilities. In the context of the Indian judicial system, where the system is laden with a substantial amount of data about judicial decisions, the prospects for AI become even more promising.

India's adherence to the doctrine of stare decisis, meaning "like cases should be treated alike," underscores the significance of precedent and past judgments in the decision-making process. The National Judicial Data Grid reveals that India has successfully disposed of nearly 160 million cases to date, presenting a vast and valuable repository of information that can be leveraged by AI systems.

One notable example that underscores the potential of using data-driven AI in judicial administration is the Chinese system known as Xiao Zhi 3.0, or "Little Wisdom." This system relies on big-data analysis of case information and prior judgments from similar cases. By drawing insights from an extensive database, Xiao Zhi 3.0 is capable of rendering judgments within a remarkably short timeframe – approximately 30 minutes as opposed to the same issues requiring 10 separate trials if handled by a human judge.

Indeed, the robustness and adaptability of AI make it a preferable alternative to human judges, especially in addressing the challenges posed by the recent legislative changes in India. The Indian Parliament passed three criminal laws – the Bharatiya Nyaya Sanhita (BNS); Bharatiya Nagarik Suraksha Sanhita (BNSS); and Bharatiya Sakshya Adhiniyam (BSA) – aimed at replacing outdated British-era laws is a significant step toward criminal legal reform. However, in the absence of the required paraphernalia on the ground and adequate training of judges, it will be several months for the Acts to be effective, highlighting the gap between legislative intent and practical execution. In a scenario where robo-judges, powered by AI, were at the forefront, this implementation delay could have been mitigated significantly. The inherent capabilities of AI to swiftly adapt to new information and enact changes make it a powerful tool for the instant application of newly enacted laws.

The integration of AI into the judicial administration, a global trend witnessed over the last decade, is gaining momentum in India, particularly catalyzed by the positive impacts of the COVID-19 lockdown. Notably, the Supreme Court and various High Courts in India have embraced technology, introducing online filing of suits and virtual court proceedings. This technological leap not only enhances convenience but also fosters transparency in legal processes.

Data-driven decision making

To capitalize on this momentum, the next frontier involves the strategic integration of AI into judicial administration. The promises of increased efficiency, data-driven decision-making, and enhanced access to justice come with challenges, including ethical considerations, potential biases in data, regulatory frameworks, and the transparency of algorithms. The experiences garnered during the pandemic underscore the imperative of continued technological evolution in the judicial sector. The thoughtful incorporation of AI stands as a pivotal step in shaping a more accessible, responsive, and technologically advanced judicial administration system in India.

With India's staggering case backlog and limited working days, AI offers a potential solution by working independently of holidays and accelerating procedural stages. Leveraging vast judicial data, AI models could provide efficient, reasoned judgments, exemplified by China's Xiao Zhi 3.0. The recent passage of amended criminal laws in India highlights the challenges of human judges' adaptability, contrasting with the instantaneous application capabilities of robo-judges. COVID-19 accelerated technology integration in Indian courts, paving the way for the use of AI in judicial administration. Despite ethical and fairness concerns, AI's potential to alleviate the judicial burden and deliver quick, data-driven decisions could be a transformative step for India's judicial administration system.

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