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## Use of AI-driven support system to help courts in predicting child custody outcomes in India

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### Abstract

Predicting child protection outcomes using AI-driven support systems under Indian law raises interesting possibilities and challenges. This study examines the feasibility of using AI in Indian courts to assist in child custody decision-making. The Indian legal system is complex and topical in child custody cases, where sociocultural and family factors heavily influence judicial decisions. The potential integration of AI provides an opportunity for objectivity and continuity in accuracy to enter the system. However, there are several challenges to implementing such a system in India. These areas include addressing ethical concerns related to algorithmic decision-making about sensitive family matters using the right, this research topic raises questions about the feasibility of introducing AI into the Indian childcare decision-making process. This suggests the need to carefully consider these challenges and their potential benefits when assessing the utility and appropriateness of using AI-driven support systems in Indian courts to set childcare outcomes to help judges in faster fact-finding and to make decisions on the same. In addition, we analyzed the use of AI in other countries.

**Keywords:** AI-driven Support system; Child Custody; Machine learning; Best Interest of Children; E-court

### 1. Introduction

Divorce has traditionally been considered a social taboo in India. Because of the unforeseen COVID-19 outbreak, the country has seen a hike in cases of not only patients but also in the number of divorce and child custody petitions in India. "Post-corona, the Maharashtra Capital saw a nearly three-fold increase in cases pertaining to divorce and women-related issues being filed." When a marriage dissolves or results in the separation of spouses, the children born out of that marriage are most impacted. Child disputes are among the most contentious and emotionally charged cases that come before the family court.

Defining the "Best Interests of children" in complex matters in legal practices and law formulations. However, child custody matters in India can experience delays owing to various factors, including overburdened courts, lengthy legal procedures, and evidence gathering. In such cases an AI-driven decision support system for predicting child custody outcomes in family court cases with the aim of assisting judges and legal professionals in making more informed and fair decisions.

The characteristic of artificial intelligence is its capacity to think and make choices with the greatest likelihood of achieving a specific goal. Machine learning (ML), a subtype of AI, revolves around the concept that computer systems can self-learn and adjust to new data without human intervention. This research aims to explore the utilization of AI-driven support systems in assisting Indian courts.

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It is not that India has not started its journey towards E- court projects in 2021, the AI-based portal ‘SUPACE’ was launched to assist judges with legal research. SUPACE stands for Supreme Court for Assistance in Court’s Efficiency. What does this model perform? It collects relevant facts and customizes the data as per the need of the case and the way judges think. The main factor to understand is that it has not been designed to make decisions but only to help in terms of making the data available to judges in less time. 1,432,529,280+ Indian population has to have a smooth mechanism for solving the pending bulk cases with the assistance of AI tools to carry out the process faster without any error.



**Figure 1** COVID-19 impact on divorce and child custody interlinkage concerns

With reference to Fig. 1, the key points into consideration are the high divorce rate, court proceedings during the pandemic were delayed due to lockdown and restricted physical activities, affecting the timeline for divorce and child custody cases. It also has created unique child safety concerns, questions about child’s safety and visitation rights have become increasingly complex, and parents must balance children’s health with court-ordered policies. It addresses the backlog of cases, many courts in India have started conducting virtual hearings and facilitating online arbitration. This shift to online platforms could trigger some divorce and child custody issues, although it came with its own set of challenges, especially for those without simple technical skills. The emotional toll of the pandemic, including anxiety, depression and isolation, has taken its toll on the divorcing couples and their children. The pandemic exposed weaknesses and inefficiencies in the legal system. It may drive discussions about reforming family and divorce laws to better address the changing dynamics and challenges faced by families in India.

## 2. Literature review

“In 2019, the Supreme Court established the “Supreme Court Artificial Intelligence Committee”, initially led by Justice S. A. Bobde and currently chaired by Justice D.Y. Chandrachud. This committee’s purpose is to leverage AI for humanitarian support within the judicial system to enhance efficiency in delivering justice”.

“The incorporation of AI in the Indian judiciary can offer several advantages:

- Streamlining administrative processes in courts and assisting judges and lawyers in decision-making.
- Simplifying the retrieval of legal precedents to gather critical legal points and facts.
- Accelerating judicial proceedings by providing comprehensive legal briefs and conducting relevant legal research.
- Addressing the persistent issue of court backlogs.”

“The Supreme Court AI Committee aims to explore software solutions that can save time and enhance the efficiency of Indian Courts. CJI S.A. Bonde has been a proponent of AI technology, citing its successful implementation in the Bombay High Court, where it reduced the workload of registry officials and allowed for earlier departures. The legal system has been slow to adopt these advancements and delay hinders the courts’ ability to enhance the speed and quality of legal service”.

The main aspect of making people understand is the ‘build trust’ in the AI system. Today India is moving towards ‘Digital India’, if India puts a step further forward in the judiciary support system as one of the initiatives started with SUPACE and the Bombay High Court. During COVID-19 the Apex Court directed to promote technology, with that motive it launched an ‘online dispute resolution platform called SAMA, which was introduced in August 2020 to support the first ever online Lok Adalat in India’ this helps in a systematic flow in the process.

The main focus on child custody is that it is very easy to mold and influence and shape the minds of minors which creates an undue influence of the party. It creates a positive and negative impact in the long run. Yes, it is correct to say that technology does come with some disadvantages as positive comes with negative, but with regular updates and modifications, it can help in the long run.

In child matters court does deal with the aspect of the 'best interest of the child' but with respect to fast decisions by the court of law. The pendency and increase in the matters of divorce have created a big burden on the courts. It could not be resolved by creating new courts or judges but by keeping a monitor on it. It all starts with a divorce petition which creates a large gap of time for order and then child custody. A limitation period has been provided under the law but what about not been followed on the actual ground in many cases?

The determination of child custody in India is a big legal issue involving various factors, including the 'welfare of the child', parental capacity and cultural norms. However, this process is often subjective and lacks consistency, potentially leading to disputes, injustices, and delays in the legal system. The problem at the heart of this research is the need for a more objective and data-driven approach to child custody decisions in India.

The question that is put up always is can AI-driven support systems be effectively deployed within the Indian legal framework to provide predictive insights that will support the judges in making fair and fast custody outcomes. This research aims to address the feasibility, accuracy, and cultural adaptability of AI-driven child custody prediction systems in the Indian judicial system.

It also tries to understand the legal, ethical, and societal implications of AI from a child custody perspective, in consideration of the unique socio-cultural aspects of India's legal system, with analysis of other countries, to contribute to more equitable and efficient child custody decisions. Exploring the potential benefits and challenges of introducing AI-driven support systems into the child custody decision-making process in the specific context of India.

The delay in proceeding of custody cases for minor children could lead to a detriment in the children's best interests. By focusing on the analysis rather and not on algorithm development, this dissertation will provide a comprehensive evaluation of the practical implementations of implementing AI-driven support systems in predicting child custody outcomes in the Indian Legal System.

Child custody cases in India are regulated by several laws which itself makes it very complex and interesting to understand and think about. The Hindu Minority and Guardianship Act, 1956, The Guardians and Wards Act, 1890. It is also important to analyze why society or people are still so confused and unsure about the implementation of AI in the legal framework.

AI is a recent technology and is still growing with new data, dies it creates a risk factor whenever we think of online stuff. This article will first overview the actual utilization of AI utilizing courts and show how long way the judiciary has advanced. "AI can be described as a system-based that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environment."

The main starting point of the content is related to the "Right to a fair trial, Article 6 of The European Convention on Human Rights deals with the right to fair trial." The first attribute focuses on the independence of the court without any undue influence and shall be fair and have fact proceedings. But again, the delay in proceedings in Inda is a matter of big concern.

The model cannot be just created and bought in one interphase rather it has to be divided and grouped into different categorized manner. "AI systems are categorized by function and organized by the litigation procedure phase they work most within the pre-trial phase, the filing phase, the research phase, the hearing phase and the decision phase." Digital India does as the potential and means to work on the model for the development of courts. For society at large, we see that it feels like a new phenomenon and whether will it be possible in India is also a big question in the minds of people, but this technology has been introduced in many different countries and is successfully established in the system of law. Examples "The Solution Explorer, used in Canada, British Columbia, it is an AI system that provides legal information to potential litigants in the pre-trial phase." But again India being diverse in its culture, language and many other aspects it is not easy to combine all the factors in one, it has to be separated.

"Intellect AI automates courts in the document workflow. It has been used in Arkansas and a few countries in Florida since 2018." "Supreme Court Portal for Assistance in Courts Efficiency (SUPACE) is an AI tool that assists judges with legal research, it was launched in the year 2021. It retrieves facts and issues from the documents submitted by litigants, finds relevant laws, and presents them to judges, subsequently speeding up the legal process and reducing the number of pending cases."

There are various models that are been used in courts in different countries in different categorizations of work. This can give a clear idea as to how the AI model can be established with different frameworks and the categorization of

requirements. Situations like COVID-19 can bring a lot of similar problems in the society in terms of child custody matters are concerned. Even though the marriage is a pure sacrament, the 21st generation has a lot of mental stress that does mislead many a time.

It is true that family court matters are increasing tremendously, but with the establishment of a concrete system, it can be resolved or diluted in a very fast manner. “The EXPERTIUS is an AI which advises family court judges and court clerks in Mexico on how to decide pension claims”

When an AI model is established, it is a significant important factor to reduce the risks and increase the efficacy in the court of law. Why is it important? Can we not work without it? Point one is that yes, work without it but the time duration to deal with those is going to have a difference this may also lead to biases in some or the other way. Let's first talk about its benefits, India being a developing nation as a whole does require a lot of inter-support mechanisms that is people are still not aware as to how to go about the filing of the case, which many a time leads to delay in getting the relief or the case may be.

Critically understanding in the child custody concept, the “best interest of the child” is always taken into consideration which is always the main focus, by keeping it as a focus can the AI model concerning the religious obligation can be created to help the judges in easy issues and fact-finding in less amount of time is also a point of understanding as a whole. “For example, the EXPLORER in Canada provides people with validated legal information and can help individuals resolve their legal issues before bringing a case to court.”

All systems do come with some or the other risks it is not that they cannot be resolved but from time to time process they can be overcome. One of the basic problems that could be faced is the internet, if a pre-trial AI service is been provided to the people it could be only accessed by those who have an internet connection with relation on to how to use it as well. Every act comes with consequences what if after a period of time with the use of such models creates an influence on the judges on to relaying on that data and not further go into depth of it? Again, the topic comes back to the understanding that it is a “Human-centered AI model” that can be controlled as per the will and wish of human beings in a good manner as well as a bad manner. What are we trying to tackle here it is the time, money and efficiency of the court and the parties. “Justice delayed is justice denied.” But here we are trying to turn “risk into benefit in the collaboration of humans with AI”

Child custody laws in India can be “perplexing for parents and children and can lead to highly emotional situations.” Under the case of “Anil Kumar Jain V, Maya Jain, the Supreme Court emphasized the importance of providing stability and consistency in the child’s life and avoiding frequent transfers of custody.”

“Just having an unresolved parental dispute hanging over the child for so long can be extremely harmful and if no contact is taking place between the child and the parent pending the resolution of the proceedings, such delay may cause irreparable damage to the child’s relationship with that parent.

### *Research objective*

- The objective of this research is to investigate the post-COVID-19 problems in child custody disputes, explore the feasibility, assess the potential impact, efficiency and backlog of family court cases in India, draw insights from AI-driven support systems in court cases in other countries and identify the limitations and challenges associated with implementing AI systems in child custody cases in the Indian context.
- To gather and analyze experiences and best practices from other countries where AI-driven support systems have been integrated into court cases.
- This research aims to provide a comprehensive understanding of the role of AI in child custody disputes in India, considering both the potential benefits and challenges. It also seeks to draw on global experiences to inform the discussion in the Indian context.

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### **3. Results**

The research on the use of use of AI-driven support system in predicting child custody outcomes in India with the analysis of different countries has brought few findings, the study has demonstrated that if the AI model is been implemented in the child custody decision-making support system process it can lead to a remarkable improvement in the accuracy and fairness of these decisions. AI support system, by reducing the influence of human bias and considering a border spectrum of relevant factors, contributes to more informed, equitable and child-centric judgements. Findings indicate that AI-driven support systems promote consistency in custody decisions across various courts in India,

ensuring that similar cases receive similar outcomes. Moreover, the objective of parental capabilities, along with the reduction in case processing time, has the potential to expedite legal proceedings and alleviate court backlog.

This research has underscored the critical importance of addressing ethical, privacy, and legal concerns associated with AI implementation in the child custody domain. It does highlight the necessity of adapting the legal framework, addressing technological readiness, and building people and legal framework trust to effectively harness the benefits of AI in child custody matters. Ultimately, the study offers valuable policy and implementation recommendations for policymakers to navigate the path towards more efficient, just and child-focused child custody outcomes in India. Taking the vast experience from different countries can help in minimizing the loopholes in the system.

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#### 4. Conclusion

The post-COVID-19, child custody disputes in India have been further complicated by various factors, such as changing work arrangements and concerns about health and safety. AI could be used to streamline the decision-making process, but it is still seen as a taboo like divorce. It should always work alongside human experts, as custody cases are highly sensitive and emotionally charged.

AI can help by automating tasks like document processing and preliminary assessments. Experiences from countries like the United States, China, Brazil and many other countries. AI tools advancement could aid in court case management and issue resolution. Nevertheless, the judiciary must guarantee that AI's application in the legal sphere aligns with our constitutional fundamental rights. Given AI's vast knowledge potential and rapid growth, there is no justification for the Indian legal system to fall behind. To enhance AI's integration into the judicial sphere, there is a need to upskill both the current and future workforce. "Risk for benefit" does lie under the understanding of the legal system when AI is being used with the justice system. Taiwan is the first country to successfully make an "AI decision tree model" which has shown an 85% of accuracy in the empirical study under child custody matters. The importance of factor determination is also important.

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