

**ROLE OF ARTIFICIAL INTELLIGENCE (A.I.) IN INDIAN JUDICIARY  
SYSTEM**

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**Abstract**

Justice has dealt with procedural delays for decades, contributing to the rise of Artificial Intelligence (AI) to face the problem. Therefore, it is essential to understand and analyze the implications of AI on speedy trial and how AI can accelerate judicial processes. To this end, we conducted a case study at the Supreme Court of Brazil (STF), collecting documents and conducting interviews for content analysis. The results consolidated a framework model that combines resources and impacts of AI on the velocity of legal decisions demonstrating how and what solutions contribute for judgment, pre-trial, and legal support. Therefore, it is believed that the gain in procedural speed with AI is not just a myth. It can become a reality, but with limitations, because there is a long way between the use of this technology in merely operational tasks and its use in complex activities such as evaluating processes in their entirety. For these future challenges, we highlight research proposals for more effective advances.

**Introduction**

For decades, the role of the Judiciary in several countries has been considered precarious (Bielen, Peeters, Marneffe, & Vereeck, 2017; French, 1933; Friesen & Information, 1984). In this context, one of the most debated issues is the speedy trial, which is related to the system's ability to respond to the demand by the Judiciary at an appropriate time (Ippoliti, Melcarne, & Ramello, 2014). Nevertheless, it has been observed high costs, long delays for the completion of proceedings and, consequently, procedural congestion (Gomes, Alves, & Silva, 2018).

Notwithstanding historical progress, delays and other problems in public services persist and are addressed continuously with Information and Communication Technology (ICT) (Dutta et al., 2019; Kum, Duncan, & Stewart, 2009). In this sense, Artificial Intelligence (AI) has been drawing attention (Chen, Guo, Gao, & Liang, 2019; de Sousa, De Melo, De Souza, Farias, & Gomes, 2019; Kankanhalli, Charalabidis, & Mellouli, 2019; Levmore & Fagan, 2019). There are courts in several countries that adhere to this technology (Alshahrani, Dennehy, & Mäntymäki, 2021; Julius, 2018).

Zelevnikow (2017), for example, presents the online dispute resolution systems (Online Dispute Resolution - ODR), which have proved to be a good option for improving the speed. On the other hand, Langbroek (2019) points out that AI does not appear to be the solution for reducing procedural

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stock or for increasing speed. It only reports that this technology can provide other types of benefits, such as improving the assertiveness of the evidence.

Thus, there are divergent hypotheses, but without checking the implications of AI on speedy trials and the factors associated with this phenomenon. Therefore, it is not clear whether the expected evolution occurs, which is corroborated by recent studies, which warn about the importance of understanding what the implications of new technologies for legal institutions are - with emphasis on AI (Andrade & Joia, 2012; Gomes et al., 2018; Iriberry, 2015; Omoteso, 2012; Wallace, 2017).

In addition to the whole context involving AI and speedy trials, de Sousa et al. (2019) draw attention to the need to investigate the use of AI in specific areas of the public sector, which constitutes a promising research opportunity. This study seeks to understand and analyze the use of AI in the Judiciary, more specifically, the contributions and limitations of this technology in the speedy trial.

To attend this objective, the Brazilian Superior Federal Court (STF) was selected for a case study, considering the analysis perspectives present in the literature. This study analyzes the STF's experience from the point of view of the implications of AI in the speedy trial. It also presents how AI has contributed to accelerating legal proceedings and obtaining a path for quantitative research that allows generalization.

The remainder of this paper is structured as follows. Section 2 presents the main concepts related to AI and speedy trial. Section 3 describes the research methods and techniques applied, detailing the case study and the literature review. Next, section 4 presents the results and discussions. In this section, it discusses the framework of the impact of AI on speedy trial. Finally, section 5 presents the conclusion, demonstrating the limitations of this study, and potential future researches.

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Section snippets

Juridical system and speedy trial

The Judiciary is responsible for compliance with the laws. Hence, it performs five functions: Administrative, Enforceable, Declaratory, Conciliatory, and Judicative. The effectiveness of applying these functions is continuously questioned due to problems related to speedy trial (Whalen-bridge, 2019).

Speed is related to the time between the filing or termination and trial of a case. It addresses variables of time, productivity, and procedural congestion (Mery, 2015; Staats, Bowler, Hiskey,

### **Research method**

The research presents a qualitative approach and uses the case study technique (Godoy, 1995; Soy, 1997; Yin, 1984). The logic is inductive since starting from particular facts intended to reach a general conclusion (Medeiros, 2006). It is descriptive because it seeks to describe characteristics of a specific phenomenon (Vergara, 1998) and exploratory because it can support the construction of a theory in a not very sedimented field of knowledge, it has a small sample and qualitative data

The federal supreme court and the adoption of technologies based on AI

The institution chosen for the case study was the Federal Supreme Court (STF), the highest Court in the hierarchy of the Brazilian Judiciary system. It is responsible for ensuring that the legal rules follow the dictates of the Brazilian Constitution (Filho, 2016).

Among its main attributions is to judge direct actions of unconstitutionality and declaratory actions of the constitutionality of laws, as well as the plea of noncompliance with a fundamental precept arising from the Constitution

### **Discussion**

In this section, we will analyse the case study results in comparison with the overview presented in the literature. We found that the high volume of demand is the main factor of a negative impact on speed, which causes the congestion of lawsuits, raising the cost of justice.

At this point, it is possible to verify that the managers assign the responsibility for the body's slowness to external factors. Nonetheless, there can be solved, or at least mitigate, reviewing internal aspects, which go

### **Conclusion**

The general scenario of the Judiciary is one of high procedural congestion, generated by high demand and low speed in resolving cases. The social repercussions of this situation are severe, which has placed speed trial as a priority for courts worldwide. In this scenario, the AI application stands out to solve this problem. The question that gave meaning to the research (Artificial Intelligence and speedy trial in the Judiciary: myth, reality or necessity? A case study in the Brazilian Supreme

Authorship statement

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in the work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript. Furthermore, each author certifies that this material or similar material has not been and will not be submitted to or published in any other publication before its appearance in the Government Information

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Recent academic publications highlight the potential benefits that AI could have for policy making, making it more dynamic and data-driven (Valle-Cruz et al., 2020), improving public service delivery

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(Aoki, 2020) and the internal management of public administrations (Medaglia, Gil-Garcia, & Pardo, 2021). Others highlight various application areas in which Artificial Intelligence could improve the functioning of various government domains, such as the judiciary (de Sousa, Fidelis, de Souza Bermejo, da Silva Gonçalo, & de Souza Melo, 2021), policing (Meijer, Lorenz, & Wessels, 2021), social care (Andersson et al., 2021) as well as many others (Wirtz et al., 2019). However, the potential benefits are overshadowed by research highlighting various barriers to the use of these technologies by government, such as the need for the right capabilities (Mikalef et al., 2021), attention (Alshahrani, Dennehy, & Mäntymäki, 2021), data governance (Janssen, Brous, Estevez, Barbosa, & Janowski, 2020), ethical concerns (Zuiderwijk et al., 2021) as well as other factors hindering or facilitating its use.

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work, named “How and where is artificial intelligence in the public sector going? A literature review and research agenda” is published by Government Information Quarterly.

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