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Summary of the PhD dissertation

"The Use of Artificial Intelligence in Civil Proceedings"

The doctoral thesis examines the utilization of artificial intelligence (AI) in Polish civil proceedings. Its objective is to verify the legal admissibility of automating judicial activities within civil cases, considering two primary models: replacing the judge with an AI system (full automation) and supporting human decision-makers with AI tools in resolving civil cases (semi-automation model, comprising two distinct sub-models serving different functions).

The main research problem involves verifying the compatibility of automating civil proceedings with the guiding principles that shape and define the civil process. These principles encompass constitutional principles of justice related to the civil judiciary and the procedural principles defined in the Code of Civil Procedure. Based on this examination, the thesis seeks to identify a potential framework for implementing AI-driven actions, addressing the crucial research need of establishing a responsible scheme for the implementation of artificial intelligence in the judicial process of applying the law. The legal analysis is grounded in the current technological landscape, considering the possibilities and limitations of both symbolic and subsymbolic approaches in artificial intelligence research. It is also complemented by addressing the challenges posed by specific research approaches in AI studies and providing practical examples of AI applications in law.

The thesis is divided into three chapters, preceded by an introduction and concluded with a concise presentation of the final conclusions.

The first chapter aims to contextualize the considerations of using artificial intelligence in judicial applications within a broader technological context. It provides an overview of the historical development of AI research, addresses definitional issues, and characterizes selected AI research approaches (knowledge-based systems, machine learning, neural networks, evolutionary algorithms, reasoning methods based on imperfect knowledge, and defining fuzzy

concepts in knowledge systems). The chapter then explores the intersection of artificial intelligence and law, outlining the contributions of scholars in the field of Artificial Intelligence and Law, including both foreign and Polish researchers, in the development of automated decision-making systems in law. It also discusses the current landscape of commercial AI systems applied in the legal domain. The chapter concludes with a discussion on the automation of civil proceedings, presenting practical examples of AI applications in judicial systems of various countries, characterizing the subject of automation, and describing models of civil proceedings automation (full automation and semi-automation within author-defined sub-models of suggestion and confrontation).

The second chapter focuses entirely on the analysis of the feasibility of realizing the fundamental procedural principles in automated civil proceedings. It encompasses the characterization of basic principles of civil proceedings, followed by the validation of how the adoption of either the full automation or semi-automation model affects their proper implementation. This examination explores the permissibility of using AI tools for automating substantive tasks within the civil judiciary, based on constitutional principles of justice (with particular emphasis on the right to a fair trial, as well as the principles of judicial independence and impartiality) and procedural rules of civil proceedings (through the analysis of which, hypotheses regarding the admissibility of automation in trial or evidentiary proceedings can be verified). Among the elements of the catalog of procedural principles that would be distorted to such an extent that further correct fulfillment of their functions by automated civil proceedings would be impossible, the author identifies the right to a fair trial and judicial independence as primary concerns.

The institutional and procedural analyses conducted in the second chapter pave the way for the third chapter, which focuses on implementation issues. The objective of this section is twofold: to provide an overview of the remaining regulatory space concerning the automation of civil justice (taking into account the current applicable regulations and the projected European legislative landscape related to AI) and to outline the proposed framework for automating Polish civil proceedings and potential areas of implementation. Considering that the introduction of artificial intelligence into civil proceedings must comply with existing legal regulations, including the principles of a democratic rule of law and the guiding ideas shaping the content and form of civil proceedings, the third chapter addresses the question of the role that can be assigned to AI systems for the purpose of automating civil proceedings. The primary *de lege ferenda* postulate is to assign AI systems the role of *quasi*-judicial bodies, to which only adjudicatory activity pertaining to legal protection and specific elements of justice can be

delegated. The author also points out the inadmissibility of broad applications of semi-automation in the suggestion sub-model and characterizes confrontation-based semi-automation as the variant that contributes most significantly to improving the quality of resolving civil cases.

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