

Chapter 2

Utilizing Artificial Intelligence in Legal Practice



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Abstract The authors investigate the experience of using artificial intelligence (AI) in law firms' activities globally. During the research, it was revealed that: (1) Legal Tech is a branch of business specializing in information technology services for professional legal activities and providing consumers with legal services using information technologies; (2) there is no single list of Legal Tech; lawyers, theorists, and practitioners present Legal Tech classifications based on various criteria; (3) according to the authors of this monograph, currently the primary technologies are (a) “predict courts’ decisions” or “prediction technology” and (b) “predictive coding”; (4) the recognized advantage of using AI tools in legal practice is efficiency-increasing capacity. The future of AI technology will give legal practitioners a competitive edge in litigation, enabling them to serve their clients better. Law firms that use AI will be more in demand, and firms unable to automate their activities may lose clients due to higher prices for the same services.

Keywords Artificial intelligence · Civil proceedings · Arbitration mediation · Legal tech · Predictive coding

JEL Codes F36 · G15 · G21 · K24 · O16

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2.1 Introduction

Technology for law firms and lawyers is growing steadily and hit a record \$1 billion in investments in 2019. In terms of business technology and innovation, legal technology follows the world's most influential trends (Matytsin & Rusakova, 2021), with artificial intelligence and workplace automation (KeyVision, 2020). Technology provides new, more efficient, and faster tools that help legal services enter the market with more excellent reliability, consistency, and faster speed. Technological advances can be expected to create stress and job losses but also create new opportunities (Inshakova et al., 2020a, 2020b).

The authors fully share the views of Heather Suttly, a market strategist and law firm management consultant, who, in her 2020 article "The Next Decade of Legal Services: Embracing a Change in the Law Market," stated that "If you thought the legal services industry had radically changed in the last decade, then you are badly mistaken. Hurricane changes will mark the next decade. The legal market is becoming tougher, denser, and more fragmented, and competition in various forms continues to intensify. For lawyers, the coming era is turbulent, confusing, and disturbing. The key to survival is flexibility" (Suttly, 2020).

Since the beginning of 2019, several exciting events have taken place that, from our point of view, have put the problem of artificial intelligence in the first row of dispute resolution problems that must be taken into account as practitioners (judges, lawyers, and businessmen) and legislators. For the first time, in February 2019, in the High Court of England and Wales, in mediation, a decision was made by an AI—a "robot mediator." An English mediator, Graham Ross (Hilborne, 2019) spoke about this in his interview with "Legal Futures." The dispute concerned approximately £2000, representing the outstanding payments requested by the client's coach after completing a personal counseling course. Graham Ross stated that the parties to the dispute, whom he named E and D, decided to use the online court at the stage of public testing in the High Court of England and Wales (Ermakova, 2018). After initial attempts to resolve the dispute failed, a hearing was scheduled. The controversy continued for three months when Mr. Ross encouraged the parties to use "Smartsettle ONE," an AI-based Internet dispute resolution (ODR) tool. The system, developed by the Canadian company—iCan Systems, allows both parties to make private offers and uses algorithms to bring both parties closer to an acceptable settlement. As a result, the system allowed the parties to settle the dispute in less than an hour (Bailey, 2019).

In an increasingly competitive environment, forward-thinking law firms are focusing on the technology of the future. In the future, advanced legal technologies support their lawyers and increase their professional potential, allowing them to provide their clients with services of the maximum value (Ermakova & Frolova, 2020).

2.2 Materials

The scientific base of the article is formed based on the scientific works of Russian and foreign scientists. Among the works of Russian authors studying the legal regulation of artificial intelligence in the provision of legal services, it should be noted the monograph Ermakova E. Reforms of civil proceedings, arbitration and mediation in foreign countries, 2014–2018 (Australia, England, Germany, Canada, USA and France) (2018); and scientific articles: Biryukov (2019), Matytsin and Rusakova (2021), Gololobovm (2020), Ermakova and Frolova (2020), Kupchina (2020), and Rozhkova (2020).

General issues of regulation of artificial intelligence in the field of legal services in foreign countries are disclosed in the works of foreign researchers: Apostolova (2020), Bailey (2019), Chen (2019), Dalton (2020), De Westgaver and Turner (2020), Engstrom and Gelbach (2020), Hilborne (2019), Moran (2020), Morgan and Reed (2019), Pasquale and Cashwell (2018), Patton (2018), Suttie (2020), and Trasberg (2020).

The empirical base is provided by the judicial practice, reflecting the characteristic aspects of the legal regulation of artificial intelligence, inn particular the precedent in the case “Da Silva Moore v. Publicis Groupe et al.” (2012).

2.3 Methodology

The scientific development of the content of this chapter of the monograph is carried out based on the general scientific method of historical materialism. General scientific methods of cognition are used: dialectical, hypothetical-deductive method, generalization, induction, and deduction, analysis and synthesis, empirical description. The study also used private science methods: juridical-dogmatic, statistical method, method of comparative legal analysis, and others.

2.4 Results

2.4.1 *On Legal Tech*

Legal Tech is a branch of business specializing in information technology services for professional legal activities, and since the late 2000s, it provides legal services to consumers using information technology. Russian scholar M. A. Rozhkova pointed out that “Legal Tech” (short for legal technology) is a variety of platforms, programs, products, and tools, specially designed to simplify and optimize the processes that make up the professional activities of lawyers. Legal Tech is a technological solution created for professional lawyers and legal businesses to increase the efficiency of

the provision of legal services or legal support for businesses. The most prominent domestic example of Legal Tech, undoubtedly, “is the services of well-known reference and legal systems that offer verification of counterparties, drafting of contracts, selection of judicial practice in a specific case, and others” (Rozhkova, 2020).

The provision of legal services to consumers using information technology is implemented through online mediation between the customer and the law firm or the provision of legal self-service tools, eliminating the need to contact professional lawyers. The USA became a pioneer in implementing Legal Tech solutions where, in the early 2000s, startups began to appear, actively introducing information technologies in solving legal problems. Among the first such companies are Rocket Lawyer and LegalZoom, which provide services for creating dynamic documents, smart contracts, and legal advice (Inshakova et al., 2020a, 2020b).

It is also necessary to note the Legal Tech movement, which is to revise the traditional views on resolving legal issues by introducing modern information technologies in legal services. In Russia, an independent magazine, “Legal Insight,” created in 2011, by Ph.D. in Law, M. Gaskarova, is devoted to Legal Tech technologies. There are many Legal Tech Web sites in Russia. For example, the information blog “Pravo Tech,” oriented to young lawyers, which in addition to the section “Legal Tech,” contains sections such as (a) automation cases; (b) conferences and forums; (c) chatbots¹; (d) “dashboards” for legal practice,² and others. The blog also contains links to lawyers’ services: Casebook for checking contractors; Caselook for search and analysis of judicial practice; Case.one for automation of the lawyer’s work; Form.one is a constructor for chatbots; Doc.one is document constructor; File.one for knowledge base and eDiscovery.

Legal Tech’s list does not exist; the list of services is constantly updated and changed, some services replace others, and new findings and directions emerge. However, without any exception, all technological solutions of Legal Tech use AI. Computer technology development follows Moore’s law, which states that the number of transistors in an integrated circuit doubles every one and a half or two years (Moore’s Law, 2014). This exponential growth has continued for over forty years of the computer era. At the end of the twentieth century—the beginning of the twenty-first century—computers played the same role as steam engines in the nineteenth century—they are the first engines and a symbol of progress. Scientists recently reaffirmed that Moore’s law holds and noted the same exponential growth in telecommunications and information storage (McGinnis & Pierce, 2019).

In 2020, Freshfields lawyer K. Apostolova argued that many AI-driven tools have appeared on the legal market. Recently, peer reviewing of documents has already

¹ A chatbot is a software application used to conduct an online chat conversation via text or text-to-speech, instead of providing direct contact with a live human agent. A chatbot is a type of software that can automate conversations and interact with people through messaging platforms.

² “Dashboard” is an information panel that displays the key performance indicators (“KPI”) of the department or the company as a whole. Thus, a dashboard’s main function as a business intelligence tool is to collect the necessary information from various programs (cloud services, databases, and others) and clearly show it in one place for the user. If necessary, one can generate a report as soon as possible.

been done with technology, and now AI technologies are ubiquitous to improve predictive coding and minimize viewing time. Legal research platforms use AI to help identify the most relevant and authoritative case law. Also, unique resources for international arbitration began to emerge, including AI tools that help in the process of choosing an arbitrator and in the study of arbitral awards (Apostolova, 2020).

Throughout the trial, lawyers constantly have to make crucial decisions. Which particular court should the claim be filed with? How to react to the statement of the opposing party? Do we need to seek an amicable settlement of the dispute? What should the client say about the final costs of the litigation? Until recently, lawyers made such decisions based on their own experience and knowledge. Today, there is a revolution in how litigants decide the most critical issues of litigation strategy and tactics (Kupchina, 2020).

The legal profession is belatedly entering a phase based on Big Data. With the advent of forensic analytics, lawyers can scientifically approach success or the amount of risk for almost every option for decisions about the fate of the process (Dalton, 2020).

However, noting the prospects and directions of using Legal Tech, one should not discount the opposing views on this problem. Let us turn to the opinion of D. Gololobov (University of Westminster), expressed on the Pravo.ru portal in April 2020: “Legal Tech is a modern god (or idol), to whom many earnestly pray, but no one has yet seen unique miracles of it. Apologetics predict its instant and imminent coming. Nevertheless, in Russia, it is still visible only for experts who are very keen on the topic. For down-to-earth realists, the issue of ‘smart contracts’ is not as relevant as the question of the need for a modern law firm to have its office” (Gololobov, 2020). From our perspective, D. Gololobov’s statement is a rather challenging and pragmatic view of the legal profession’s problems in modern conditions.

The Russian lawyer, Nikolay Teterev, Senior Manager in Forensic Practice, the Head of eDiscovery and Computer Forensics, Deloitte (Pravo.ru., 2017), tells why to automate the work of the legal department. He gave the example of a Russian company that was in suing in the USA. The American court ordered it to provide documents on particular topics within 90 days since 2009, with the participation of more than 30 employees, some of whom were no longer working there. It was correspondence, contracts, and acts, information from mail and mobile devices, and others. “We started work when there were 60 days left, and the company’s lawyers could not postpone the deadline,” said Mr. Teterev. A conventional “keyword” search returned 87,485 documents, which would have taken 175 person-days to analyze. The AI program coped on time and produced 99% accurate results—the court received 189 documents on the case and on time (the algorithm included machine learning analysis). Besides, the program has useful analytical functions; for example, it searches for similar or consistent documents and determines connections (who, how, and with whom corresponded),” Teterev added.

2.4.2 *Categories of AI Application in Legal Practice*

Experts name various categories of AI applications in legal practice. John McGinnis, Professor at Northwestern University Law School, Chicago, and Russell J. Pearce, Professor at Fordham University Law School, New York, presented their perspective on the categories of AI in legal practice in their 2019 article “The Great Disruption: How Artificial Intelligence is changing the role of lawyers in the provision of legal services.” They noted: “we describe five areas in which artificial intelligence will provide services or inputs as long as provided by lawyers: (1) disclosure of the facts of the case, (2) investigation of eligibility, (3) drafting of documents, (4) preparation of the case materials, and (5) forecasting of results of cases” (McGinnis & Pierce, 2019).

In their article “Dispute Resolution in the Age of Big Data and AI,” Herbert Smith Freehills’ lawyers Charlie Morgan and Rebecca Reed identified the following seven categories of using AI in dispute resolution: (1) at the stage of contracting, (2) at the stage of violation or failure to fulfill an obligation, (3) at the stage of developing strategies for preparing a statement of claim or response to a claim, (4) at the stage of collecting factual data and evidence, (5) at the stage of preparing a set of documents for the court, and performing administrative tasks, (6) at the stage of disclosing evidence, and (7) at the stage court session (Morgan & Reed, 2019).

In their 2020 article titled “Legal technologies, civil procedures and the future of American contestability,” American scientists David Engstrom and Iona Gelbach have already identified nine categories of AI application in jurisprudence (Engstrom & Gelbach, 2020):

1. Lawyer marketplace and matching are AI tools that allow clients to facilitate the assessment and selection of a potential lawyer. This category also includes tools that help lawyers manage their business (AI applications—Avvo, Ravel, Lexicata, and Atticus).
2. Legal (Re) Search is a tool that helps lawyers find and collect relevant materials on the case (case law, regulations, and rules) (AI applications—CaseText, Judicata, and ROSS Intelligence).
3. Outcome prediction is AI tool that predicts the outcome of specific cases. Forecasts can relate to individual judges, courts and also be used to compare court forums (sites). Predictions may include estimates of the time taken to process the case from the time the documents were filed to the decision on the case in various courts (i.e., forum shopping). Predictions can include assessing how a particular judge will respond to specific motions (e.g., to dismiss) (AI Apps—Colossus, Ravel, Case Crunch, Lex Machina, Gavelytics, and Blue J Legal). Meanwhile, the forecasting accuracy can reach from 70 to 90% (in the latter case, the Canadian company Blue J Legal carries out forecasts on labor disputes in the USA) (Moran, 2020).
4. Legal analytics are tools that perform other analytical tasks, in addition to legal search and forecasting the results, including displaying citations, analytics of court decisions in the text (judge-level analytics) (e.g., adapting arguments

- to a particular judge), and document analytics (document-level analytics), or brief document assessment (AI applications—Ravel, FastCase, Gavelytics, Premonition, and CaseText).
5. Discovery tools support or supplant the process of identifying relevant documents and marking privileged documents (AI applications—Everlaw, Relativity, OpenText, and Exterro).
 6. Document assembly and creation are AI tools that allow drafting legal documents from simple petitions (responses to petitions) to more complex claims and documents (requests for discovery, petitions, and even simple notes). (AI applications—Legalmatation and, RockerLawyer).
 7. Practice management is law firm management tool which include dashboards that manage client admission, organize critical facts and documents, and support billing or other administrative tasks (AI applications—Needles).
 8. Contract management and analysis are tools that store, analyze, create, and control contracts' execution (AI applications—Kira Systems, Ravn, eBrevia, LexCheck, KMStandards, and UnitedLex).
 9. DIY dispute resolution and online legal advice are tools that facilitate alternative dispute resolution and tools that provide automated (often online) legal advice or assistance to parties without a lawyer with litigation (AI applications—LegalZoom, Rocket Lawyer, Modria, Intraspexion, and Nolo).

As seen from the above material, there is no single list of Legal Tech. The criteria for constructing such classifications also differ. In our opinion, currently, there are two main AI technologies used in jurisprudence. The first is “**predict courts’ decisions**” or “prediction technology” or “data-driven justice.” Moreover, the second technology is “**predictive coding**,” which uses artificial intelligence at the stage of document verification to study and identify relevant documents. Predictive coding is used at the stage of electronic evidence disclosure in countries of the English legal tradition. The two technologies are actively used in civil proceedings and arbitration and mediation (De Westgaver & Turner, 2020).

2.4.3 Predict Courts’ Decisions

“Predict courts’ decisions” are the intriguing ability of legal analytics algorithms to conclude court cases, for example, to determine specific models of judges’ behavior and the consequences that these algorithms cause (Trasberg, 2020). As P. N. Biryukov states, “now there are programs that foresee the outcome of lawsuits, including potential compensation. Thus, a new concept—“predicted justice”—has become firmly established in everyday life of European countries. While traditional justice is trying to fulfill its mission of deciding within a reasonable time frame, the predicted justice goes further. It provides algorithms for analyzing a vast number of situations in a short time that allow predicting the outcome of a dispute or at least estimate the chances for success. The predicted justice allows choosing the correct way of defense, choosing

the most reasonable arguments, evaluating the estimated amount of compensation, and others. Thus, we are not talking about justice itself, but only about analytical tools that would make it possible to predict future decisions in disputes similar to those analyzed” (Biryukov, 2019).

According to Daniel Chen (University of Toulouse, France), “predict courts’ decisions” promise to improve the efficiency and fairness of the law (Chen, 2019). Forensic analysts can assess extra-legal factors that influence decisions. To date, with the advent of high-performance AI, legal analytics has started to generate quite a stir in the legal practice of the USA and Europe, as it began to turn into a helpful tool. Legal analytics algorithms are provided with an extensive set of data consisting of the results of previous court cases and specific information about the features of these cases, such as the text of the claim or case metadata (name of the judge, court, subject of dispute, and others). The algorithm then examines the correlations between the data and the outcome of these cases, based on which it either predicts the outcome of a new case, analyzing the features of the case, or identifies patterns as to which arguments, jurisprudence, or evidence used in previous cases are most significantly correlated with a positive outcome. These correlations can be determined for specific regions, courts, judges, or juries. It is noteworthy that this technology makes it possible to effectively conclude what a particular judge may or may not like in a trial.

In 2018, American authors Frank Pasquale (Brooklyn Law School) and Glyn Cashwell presented a critical analysis of the concept of “predicted justice” (Pasquale & Cashwell, 2018). Remarkably, they argued that a new answer is starting to emerge in the twenty-first century: deploying natural language processing (NLP) and machine learning (ML) techniques to predict whether judges will hear a case, and if so, how they will decide it, as well as metadata about the ideological obligations of judges, past voting and many other variables. By processing case-related data and the text of judges’ opinions, these AI systems are designed to predict how judges will decide cases, how individual judges will vote, and how to optimize the lawyers’ speech and arguments’ presentation before those judges. The authors emphasized that this form of forecasting is like forecasters using Big Data to predict storms’ movement (instead of understanding atmospheric dynamics). Algorithmically, analyzing a database of, say, 10,000 past cumulus raindrops sweeping over Lake Ontario might be a better predictor of the next cumulus rain trail than an experienced meteorologist who does not have access to such a database. However, despite individual authors’ critical assessments, the technology of predicted justice is receiving more and more rave reviews from law firms and individual lawyers, especially in countries of the Anglo-Saxon legal tradition.

Examples of platforms and software in this category include:

- (a) Document search and forecasting system—“IntraspeXion,” USA;
- (b) Determination of the results based on the relevant case law by the system “Ravel Law’s Judge Analytics,” USA;
- (c) Lex Machina Legal Analytics Platform based on LexisNexis Company;
- (d) Database of trials—“Premonition,” USA.

2.4.4 Predictive Coding

Predictive coding is an AI technology that assists document reviewers during the review phase. Typically, machine learning technology is used to denote documents after reviewers have completed some reviews by creating a set of encoded (or tagged) documents. It improves the efficiency of reviewers by showing how they mark documents. The machine then applies these criteria to create labels for documents that have not yet been reviewed (Patton, 2018).

In legal practice, predictive coding is used primarily in the eDiscovery procedure, which is typical for the Anglo-Saxon legal tradition countries. In eDiscovery, AI is needed to navigate massive datasets in search of relevant legal documents. This process, called technology-assisted review (TAR) in the USA, begins by humanlike examining a few documents and coding them as relevant or unrelated.

Besides, several predictive coding applications are already in use in arbitration practice: “ArbiLex,” “Solomonic,” “Lex Machina’s Legal Analytics Platform,” and “Ravel Law.”

However, several obstacles prevent the introduction of this AI technology into the legal industry.

First, predictive coding is complex. It relies on technology that includes advanced data science and statistical sampling, which requires specialized skills.

Second, predictive coding is expensive to implement. It requires a significant amount of time and money to develop software and the proper “training” before predictive coding reaches its full potential as a valuable tool for electronic evidence detection.

Finally, court approval for predictive coding is still new. Moreover, lawyers fear the risk of adverse consequences if the court rejects documents that were found using predictive coding. Currently, only one US Federal district judge, Andrew Peck, had consistently approved predictive coding technology in several decisions in 2012–2016. A case in point is “Da Silva Moore v. Publicis Groupe & MSL Group” (2012), “Rio Tinto v. Vale” (2015), and “Hyles v. City of New York” (2016).

2.5 Conclusion

All the above technologies are low-level AI. At first glance, it seems that using a low-level AI in resolving disputes is generally a joyous process. The most recognized benefit of using AI tools in legal practice is efficiency gains. AI software uses algorithms that speed up document processing when errors and other problems are detected. However, lawyers often need more time to complete an assignment or prepare a document since a lawyer is paid according to the “paid hours” scheme, and the use of AI to speed up the work of a lawyer cannot be justified. According to many researchers, law firms’ pressure to adopt AI is likely to come from competing companies. Law firms that use AI will be more in demand, and firms unable to automate

their activities may lose clients due to higher prices for the same services. There is no doubt that AI technology's future use will give legal practitioners a competitive edge in litigation, enabling them to serve their clients better ultimately. It is imperative that the Russian legal sector does not get left behind and can take advantage of these competitive advantages that artificial intelligence can offer.

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