

The Role of Linguistic Artificial Intelligence Models in Drafting Administrative Contract

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Abstract

This study searched linguistic artificial intelligence (AI) models as one of the most prominent modern technologies that have brought a qualitative transformation in the field of natural language processing and text generation, with a particular focus on their applications in drafting administrative contracts, and reviews the historical development of these models, especially following the launch of ChatGPT, which marked a turning point by providing advanced linguistic technologies to a wide range of users and expanding their use in legal and administrative domains. The study assured the importance of large language models in improving the accuracy, and consistency of administrative contract drafting by reducing human errors and supporting the generation of legally consistent drafts. It therefore emphasizes the necessity of integrated safeguards, such as continuous human legal supervision, reliable and up-to-date legal data, and strong data protection measures. The study concluded that large language models can be effectively and responsibly used in administrative contract drafting only within a comprehensive framework that balances technological capabilities with human oversight and legal safeguards.

Keywords: Linguistic models, Artificial intelligence, Natural language processing, ChatGPT, Administrative contracts, Legal drafting, Legal applications, Data protection.

1. Introduction

Artificial intelligence (AI) technologies have witnessed rapid development, particularly Large Language Models (LLMs), which have become among the most influential innovations across various scientific and practical fields (Carneiro-Diaz et al., 2025). The launch of ChatGPT in 2022 marked a historic turning point in the relationship between humans and technology, enabling individuals, governmental bodies, and legal institutions to leverage unprecedented capabilities in understanding, analyzing, and generating natural language (Hou et al., 2025).

These models are no longer limited to simple tasks such as translation or question-answering; their use has expanded to more sensitive and complex domains, including the drafting of administrative contracts (Radford et al., 2018). And the Modern language models, especially those based on the Transformer architecture, rely on artificial neural networks and are trained

on massive datasets, giving them the ability to perform linguistic prediction and produce accurate, coherent, and customizable texts.

The historical development of these models, from GPT-1 to GPT-4, has enhanced their precision and contextual awareness, making them promising tools in legal and administrative fields, particularly in preparing and drafting administrative contracts, which require high accuracy, clarity, and well-structured clauses. (Singh et al., 2025)

These models offer a wide range of capabilities, including analyzing contract language, detecting inconsistencies, suggesting legally coherent alternatives, and generating preliminary drafts, thereby reducing time and effort while improving drafting quality (Carneiro-Diaz et al., 2025).

However, relying on AI models in highly sensitive areas such as administrative contracts raises several risks, including legal accuracy issues, potential ambiguity or bias, as well as privacy concerns and challenges in determining responsibility for errors produced by AI outputs.

Given these considerations, there is a clear need for a study examining the role of linguistic AI models in drafting administrative contracts, focusing on the risks they pose and potential safeguards, with the aim of developing a framework that maximizes the benefits of their advanced capabilities while preserving the integrity of legal texts and the rights of contracting parties.

1.1 Research Problem and Objectives

Despite the rapid development of linguistic AI models and their ability to analyze and generate legal texts, their use in drafting administrative contracts raises questions regarding legal accuracy, reliability, and compliance with legislation (Hou et al., 2025). This study addresses the main question: to what extent can linguistic AI models be relied upon in administrative contract drafting? It examines the nature and functioning of these models, their historical development up to current large language models (e.g., GPT-4), and their practical contributions to drafting contracts with improved accuracy and efficiency.

The research also explores potential legal, technical, and administrative risks, including bias, ambiguity, privacy concerns, and responsibility for errors. Finally, it proposes legal and technical safeguards, alongside regulatory measures, to ensure the responsible and secure use of AI models in administrative contracts. The study employs descriptive-analytical, comparative to provide a comprehensive understanding of the capabilities, limitations, and risk mitigation strategies for AI-assisted contract drafting.

2. Linguistic Artificial Intelligence Models and Their Historical Development

Linguistic artificial intelligence (AI) models are among the most significant modern AI technologies, relying on natural language processing and analyzing vast amounts of textual data to generate accurate and coherent texts (Al-Faraji, 2025).

These models gained global attention following the launch of Open AI's ChatGPT in November 2022, which marked a historic turning point in human interaction with AI technologies (Open AI, 2023).

2.1 Nature of Linguistic AI Models

Large Language Models (LLMs) represent one of the most transformation technologies in natural language processing and text generation. These models are trained on massive textual datasets to learn linguistic patterns, sentence structures, and semantics, enabling them to produce coherent texts that closely resemble human writing. (Radford et al., 2018)

The significance of these models has grown due to direct interaction between users and advanced language technologies, creating a global shift in AI applications, particularly in legal and administrative fields (Singh et al., 2025). This led to intense competition among major tech companies, such as Google, Microsoft, and OpenAI, developing more advanced language models like Bard, Bing-AI, and Claude (Open AI, 2023).

Linguistic AI models are defined as: "programs that analyze texts to generate coherent linguistic content. They can learn from massive textual data to extract linguistic patterns and semantic structures, enabling them to produce accurate legal and administrative texts" (Al-Faraji, 2025).

They rely on language modeling techniques, which use statistical and probabilistic methods to predict the next word in a given context, applicable in generating legal and administrative texts, translating legal documents, summarizing documents, and answering legal questions (Mahmoud, 2023). This development has directly influenced their use in legal contexts, including drafting administrative contracts that require linguistic precision and legal analysis. (Al-Faraji, 2025)

2.2 Mechanism and Functions of Language Models

Language models rely on language modeling techniques based on artificial neural networks to predict the next word or sentence in context. They utilize the Transformer architecture, introduced by Google researchers in 2017, which incorporates the attention mechanism allowing the model to understand relationships between words in a sentence or text (Vaswani et al., 2017).

These models are trained on massive datasets using probabilistic and statistical linguistic prediction techniques. They can perform multiple functions (Bender et al., 2021), including generating legally and administratively coherent texts, reviewing contractual clauses to detect inconsistencies or ambiguities, summarizing documents, translating texts, and answering knowledge-based legal questions. (Awaisheh, 2023)

2.3 Historical Development of Language Models

Language models have evolved significantly since the introduction of the Transformer architecture in 2017, which paved the way for advanced language understanding models such as BERT (Bidirectional Encoder Representations from Transformers) developed by Google in 2018 (Devlin et al., 2019). BERT represented a breakthrough in natural language understanding but could not generate new text.

The generative model era began with Open AI's GPT series:

- GPT-1 (2018): 117 million parameters (Radford et al., 2018).
- GPT-2 (2019): 1.5 billion parameters, demonstrating strong ability to generate coherent texts (Radford et al., 2019).
- GPT-3 (2020): 175 billion parameters, making it one of the most advanced models in language understanding and generation (Brown et al., 2020).
- GPT-4 (2023): approximately 170 billion parameters, with significant improvements in accuracy and contextual analysis (Open AI, 2023).

This evolution directly enhanced the ability of AI models to draft legal, and administrative texts, allowing them to produce contract drafts, analyze clauses, detect structural errors, and suggest precise formulations aligned with legal methodology.

3. The Relationship between the Development of Language Models and the Drafting of Administrative Contracts

The historical development of transformer-based language models — from BERT to GPT-4 — has significantly enhanced their linguistic and analytical capabilities, making them promising tools in the drafting of administrative contracts (Singh et al., 2025). With the increasing volume of transactions and the advancement of deep learning techniques, these models can now analyze administrative contracts, understand the interrelationships among clauses, grasp general and specific legal rules, propose initial drafts that reduce human effort, improve linguistic and stylistic consistency, and detect weaknesses or ambiguities in contract language. (Benedetto et al., 2024)

The evolution of linguistic AI models is a direct result of the computational linguistic revolution initiated with the Transformer architecture in 2017, which fundamentally changed natural language processing (Vaswani et al., 2017). This breakthrough is evident in modern models such as BERT and GPT, which have enabled legal and administrative language understanding at a level that was not feasible a decade ago. Consequently, language models can now support governmental agencies in drafting administrative contracts, provided there is human legal oversight to mitigate potential errors (Benedetto et al., 2024).

Administrative contract language is characterized by verbal precision, disciplined formulation, logical connection among clauses, adherence to specific legal terminology, and avoidance of ambiguity and vagueness. (Awaishch. 2025) With the development of language models, they are capable of analyzing these features and producing highly compliant texts for several reasons:

1. Linguistic development enhances legal language comprehension

Prior to 2017, language models relied on limited statistical algorithms incapable of understanding deep relationships between words or complex legal structures. The Transformer architecture enabled the analysis of legal context, inter-clause connections, textual references, and the distinction between legal terms and general terms. Studies by Devlin et al. (2019) confirmed BERT's capacity for bidirectional deep understanding, which has been applied to administrative contracts for analyzing complex legal texts.

2. Increased model size improves drafting accuracy

The number of parameters is a key indicator of a model's ability to capture linguistic patterns. Larger models better understand long-context dependencies in contracts, detect structural errors, and propose more precise formulations (Singh et al., 2025). These models can generate text closely resembling formal legal language and suggest alternative clauses that maintain linguistic smoothness and legal consistency. (Hou et al., 2025).

3. Specialized legal terminology processing

Trained on billions of words, including legal documents, modern models can comprehend procedural legal terms (e.g., offer, obligation, penalties, and specific performance) and distinguish between legal and administrative terminology (Prasad et al., 2024). GPT models, for instance, demonstrate high capability in generating legally consistent and linguistically coherent contract drafts (Brown et al., 2020).

4. Error analysis and drafting suggestions

Languages models help analyze administrative contracts by detecting unnecessary repetition, identifying conflicting clauses, pinpointing verbal ambiguity, and providing more

precise linguistic alternatives (Hou et al., 2025). These functions are closely linked to the model's ability to perform:

- Long-context understanding
- Linguistic reasoning
- Semantic text completion

All of which have evolved significantly in GPT-3 and GPT-4 (Open AI, 2023).

5. Direct relationship between linguistic development and contract drafting quality

As models' abilities to understand context, extract meanings, analyze legal structure, and produce formal texts improve, their effectiveness in drafting administrative contracts increases (Carneiro-Diaz et al., 2025). The evolution of language models is therefore not merely a technical advancement but a linguistic-legal development that directly impacts drafting quality, clause clarity, error reduction, and enhances the efficiency of government agencies in preparing contracts, positioning these models as crucial tools for the future of legal and administrative practice. (Hou et al., 2025)

3.1 Mechanisms of Using Language AI Models in Drafting Administrative Contracts

Legal language plays a fundamental role in drafting administrative contracts, as it relies on precise expression and clause formulation to ensure clarity of rights and obligations among parties. (Al-Faraji, 2025) Administrative contracts are characterized by the use of specific terminology that aligns with applicable legislation and minimizes legal ambiguities that could lead to disputes (Mahmoud, 2023).

Administrative contracts are defined as agreements concluded by public administrations for the purpose of managing or operating a public service, containing exceptional clauses that distinguish them from private law contracts, as confirmed by administrative law scholars and courts in several comparative legal systems (Chapus, 2003; Rivero & Waline, 2011). The administrative judiciary, particularly in France, has relied on two criteria to distinguish administrative contracts from civil contracts: the connection of the contract to a public service and the inclusion of unusual clauses (Thatcher, 2007).

Administrative contracts take various forms, including concession contracts, public works, supply, and service agreements (Rose-Ackerman, 2001). With technological advances, electronic administrative contracts have emerged, executed and implemented via digital platforms while retaining the key characteristics of traditional administrative contracts, such as public service control and exceptional clauses. (Singh et al., 2025)

These electronic contracts offer several advantages, including faster procedures, cost reduction, and increased transparency, but they also introduce challenges related to electronic signature validity, data protection, and platform security (European Commission, 2022; OECD, 2021).

Drafting administrative contracts, whether traditional or electronic, is essential to ensuring the public interest and safeguarding the rights and obligations of all parties (Prasad et al., 2024). Clauses must be precise and clear to avoid ambiguity while providing sufficient flexibility for the administration, in compliance with public law (Kelsall et al., 2025). Well-crafted contracts improve clause consistency, expedite procedures, and reduce legal and technical risks, making drafting a central element in the effectiveness and regular execution of administrative contracts.

Herein lies the role of language AI models such as GPT-4, which have the ability to analyze existing legal texts, understand semantic structures, and propose precise formulations for legal clauses (Open AI, 2023). These models do not merely generate coherent texts but also help

standardize legal terminology across different contracts, enhancing consistency and reducing the likelihood of disputes. (Hou et al., 2025)

1. Legal language and its importance in administrative contracts

Administrative contracts rely on precise and clear legal language, aiming to define rights and obligations accurately and avoid ambiguity that could cause legal disputes or implementation issues. (Al-Faraji, 2025) Drafting legal clauses requires logical consistency and precise use of terminology in accordance with applicable laws and regulations (Maher, 2025).

2. Role of language AI models in drafting administrative contracts

Core mechanism of AI models: Models like GPT-4 and BERT rely on Transformer networks and the Attention Mechanism, enabling them to comprehend long and complex texts and process relationships between words in legal documents effectively (Vaswani et al., 2017). This makes them suitable for handling administrative contracts with multiple interconnected and complex clauses (Brown et al., 2020).

Generating contract drafts: Trained on millions of legal and administrative texts, these models can generate coherent and structured draft contracts, respecting structural sequences and essential legal clauses (Al-Faraji, 2025). This reduces human effort and accelerates contract drafting (LegalGo, 2025).

Reviewing and analyzing contracts: Modern language models can analyze written contracts, identify ambiguous or conflicting clauses, and suggest clearer and legally precise alternatives (Open AI, 2023). They can also extract key data such as obligations, rights, and termination conditions (Metadata Extraction, 2025).

3. Relationship between legal language and AI models

The effectiveness of these models relies on their ability to understand legal terminology and context. By processing legal texts, models can determine relationships between clauses, ensure linguistic consistency, and improve administrative drafting quality (Al-Faraji, 2025). The greater the model's accuracy and the volume of legal data used, the more efficient it becomes in producing precise and coherent contract drafts. (Carneiro-Diaz et al., 2025)

Legal language forms the core of administrative contract drafting, ensuring clarity of rights and obligations, consistency across clauses, and accuracy of legal expression (Al-Faraji, 2025).

AI language models' effectiveness lies in understanding legal terminology and context to generate coherent and legally accurate contract drafts, analyze written contracts to identify key clauses and potential ambiguities, and standardize drafting across institutions, ensuring legal compliance and precision. (Al Zubaer et al., 2023) Consequently, language AI models serve as essential tools for lawyers and administrators, improving contract quality while reducing time and effort. (Metadata Extraction, 2025)

2.3 Examples of Drafting Administrative Contracts and Legal Language

1. Recitals and Definitions Clauses

Administrative contracts commonly include definitional clauses that identify the parties and define the terminology used throughout the contract (Awaisheh, 2025). Language AI models can generate precise and clear definitions, facilitating legal decision-makers' verification of terminological clarity for all parties, as illustrated below:

Traditional legal text: "The term 'Contractor' in this contract refers to any person or company responsible for executing the works referred to in Annex A".

Role of language AI: Models such as GPT-4 can generate accurate and consistent definitional clauses for all contracting parties, while also proposing alternative formulations that simplify complex legal terminology without compromising legal precision. (Parizi et al., 2023)

AI-generated example: "The term 'Contractor' in this contract refers to the natural or legal person responsible for carrying out the works specified in Annex A, including obligations related to quality standards and timeframes". (Open AI, 2023)

2. Duties and Obligations Clauses

AI models can draft clear provisions defining the duties of the contracting parties, such as:

Traditional text: "The second party shall provide the services in accordance with the technical specifications set out in Annex B and within the timeframe specified in the contract".

Role of language AI: By analyzing previous contracts and applicable legal regulations, AI models can propose precise formulations that clearly define obligations while reducing ambiguity or redundancy.

AI-generated example: "The second party shall bear full responsibility for providing the services in accordance with the technical specifications set forth in Annex B and in strict compliance with the agreed schedule, and shall assume legal liability for any delay or deficiency in performance". (Mahmoud, 2023)

This reflects the ability of AI models to transform complex legal language into precise and enforceable contractual provisions.

3. Penalties and Indemnities Clauses

Language AI models can propose accurate formulations defining the scope of compensation and the method of its calculation, for example:

Traditional text: "In the event that either party breaches its contractual obligations, the other party shall be entitled to claim compensation for actual damages".

Role of language AI: AI models can suggest formulations that clearly define the scope, conditions, and calculation mechanisms of compensation, while offering precise linguistic alternatives to avoid legal ambiguity. (Parizi et al., 2023)

AI-generated example: "If either party breaches the obligations stipulated under this contract, the injured party shall be entitled to claim monetary compensation equivalent to the value of the direct and actual damages incurred, subject to detailed documentation of such damages in accordance with applicable legal standards". (Open AI, 2023)

4. Termination Clauses

AI models assist in drafting termination provisions clearly, specifying the rights and obligations of the parties following termination:

Traditional text: "Either party may terminate the contract by providing written notice thirty days in advance".

Role of language AI: AI models can propose precise formulations defining the legal grounds for termination, post-termination rights, and procedures for the handover of documents or assets. (Al Zubaer et al., 2023)

AI-generated example: "Either party may terminate this contract by providing written notice to the other party at least thirty (30) days in advance, specifying all continuing obligations

following termination, including the delivery of documents and records related to the completed works". (Awaishah et al., 2024)

5. Use of Precise and Standardized Legal Language

Language models are capable of maintaining standardized legal terminology, avoiding ambiguity and redundancy, and proposing reformulations that enhance clarity for non-specialist readers without compromising legal accuracy. (Mahmoud, 2023).

Illustrative example: Replacing a general phrase such as: "Compliance with applicable laws is required".

With a more specific formulation: "The parties shall comply with all laws and regulations in force in the Arab Republic of Egypt relating to the execution of this contract, including Public Procurement Law No. 182 of 2018".

6. The Role of AI in Enhancing Legal Language Precision

Large language models of artificial intelligence contribute to enhancing the precision of legal drafting in administrative contracts by standardizing legal terminology, reducing linguistic ambiguity, and proposing more specific formulations that comply with the national legislative framework. (Yeung, 2018)

This function is of particular importance within the French legal system, where administrative contracts are governed by the Public Procurement Code, which enshrines the principles of transparency, equal treatment of economic operators, and sound management of public funds. (Public Procurement Code, Arts. L.2–L.5)

Language models enable the analysis of contractual clauses and the proposal of clearer provisions that precisely define the scope of contractual obligations and liabilities, in line with the principles developed by the case law of the French Council of State concerning administrative contracts (Auby, 2022; Chapus, 2015).

The jurisprudence of the French Council of State has consistently emphasized the need for clarity and legal certainty in contractual stipulations, particularly in landmark decisions such as *Tropic Travail Signalizations* and *Commune de Béziers* (French Council of State, 2007; 2009; 2011).

Thus, instead of a general formulation such as: "The contractor undertakes to perform the works in accordance with the terms of the contract".

An artificial intelligence model may suggest a more precise and legally compliant formulation under French law, explicitly linking contractual obligations to the applicable statutory framework and administrative prerogatives (Charbonneau, 2022).

Such drafting reflects compliance with the Public Procurement Code while preserving the administration's exceptional powers as recognized by administrative law doctrine and jurisprudence (Auby, 2022).

This approach highlights the role of artificial intelligence in strengthening the clarity of contractual obligations and in directly connecting them to the applicable legislative and judicial framework, thereby contributing to improved legal drafting quality of administrative contracts and to the reduction of disputes during the performance phase (European Commission, 2019).

4 Risks of Using Large Language Models in Drafting Administrative Contracts

Despite the significant benefits offered by large language models (LLMs) in drafting administrative contracts, their use entails several legal and administrative risks that must be

carefully considered (Parizi et al., 2023). Among the most prominent are risks related to the accuracy of legal texts and the context in which they are applied.

4.1 Nature of Risks Associated with Legal Text Drafting

Although LLMs are highly capable, their application in administrative contract drafting involves multiple risks related to the precision of legal texts and their contextual appropriateness:

4.1.1 Bias and Prejudice in Texts

LLMs may generate texts reflecting biases present in their training data, potentially resulting in clauses that are unfair or prejudiced (Bender et al., 2021). Because they rely on the data they are trained on, any bias inherent in these datasets can be propagated into contractual language.

Forms of Bias in Administrative Contracts: Discrimination against certain groups or entities: For example, clauses may inadvertently impose arbitrary or unbalanced conditions, undermining fairness and equality (Parizi et al., 2023).

Reinforcement of preconceptions or outdated concepts: Models may reproduce legal patterns that are no longer aligned with current legislation, leading to inappropriate or conflicting contract clauses.

Generation of texts not compliant with legal standards: This increases the likelihood of disputes or divergent interpretations of contract provisions (Kapoor et al., 2024).

Examples of Bias in LLMs: Unbalanced representation: Certain legal or social groups may be underrepresented in the training data, leading to clauses that neglect their rights or interests.

Confirmation bias: Some laws or conditions may be reinforced without considering alternatives or recent legal developments.

Temporal bias: Reliance on outdated data can result in contract clauses that reflect laws no longer in force (Al-Hendi, 2022, p. 570).

4.1.2 Interpretive and Contextual Errors

Large language models (LLMs) do not possess the capacity for fully human-like legal understanding. As a result, they may generate contract clauses that are ambiguous or not fully aligned with legal requirements (Al-Faraji, 2025).

While the language may appear precise and formally correct, it may fail to reflect the true legal intent of the parties, especially in complex cases that require nuanced interpretation of local and administrative laws. (Benedetto et al., 2024)

This limitation underscores the need for human oversight when drafting contracts with AI assistance, as the absence of contextual comprehension can lead to disputes or unintended legal obligations.

4.1.3 Design and Implementation Flaws

Complex AI models may contain programming errors or limitations in their ability to interpret legal context, potentially producing inaccurate or contradictory clauses (Al-Faraji, 2025). Such design flaws pose significant risks to the validity and enforceability of administrative contracts. Key design-related risks include:

- **Technical Weaknesses in Model Design:** LLMs are highly sophisticated software systems. Any flaw in their architecture, training, or calibration can result in outputs that are inaccurate, misleading, or legally problematic. In the context of administrative contracts, this can directly compromise contractual clarity and compliance. (Carneiro-Diaz et al., 2025)

- **Adversarial Attacks:** Inputs specifically crafted to confuse or mislead the model can result in the generation of incorrect or harmful text. This vulnerability can be exploited to manipulate contractual clauses or bypass compliance requirements.

- **Over-specialization:** While a model may perform exceptionally well in specific tasks it was trained for, it may fail to generalize to new or unforeseen scenarios. This limitation can lead to the drafting of clauses that are unsuitable, incomplete, or legally non-compliant in novel contexts. (Kelsall et al., 2025)

- **AI Hallucinations:** LLMs may produce outputs that appear factually or legally correct but are actually inaccurate or fabricated. Such “hallucinations” threaten the reliability and enforceability of contract terms and can result in disputes, misunderstandings, or invalid contractual provisions. (Al-Kasassbeh, Awaishah & Odeibat, 2024)

Implications for Administrative Contract Drafting, These interpretive, technical, and design-related risks collectively highlight the critical importance of human review in AI-assisted contract drafting. (Benedetto et al., 2024)

While LLMs offer efficiency and linguistic precision, their outputs cannot be assumed to be legally authoritative (Prasad et al., 2024). Organizations should implement strict validation protocols, combining AI efficiency with human legal expertise to ensure that contracts remain clear, enforceable, and aligned with applicable administrative and statutory frameworks.

4.2 Nature of Risks Related to Privacy and Legal Liability

Despite the significant benefits that artificial intelligence (AI) provides in analyzing and drafting administrative contracts (Prasad et al., 2024), its use entails risks related to privacy, data confidentiality, and the legal liability of parties. These risks include the following:

4.2.1 Privacy and Data Confidentiality Risks

When using AI to analyze or draft contracts, sensitive data of the parties may be exposed or misused if appropriate protective measures are not applied (Bender et al., 2021; Aawishe et al., 2024). The main risks include:

- **Leakage of personal or legal data:** This includes data stored in training models or content generated during contract processing. (Kapoor et al., 2024)

Example: If copies of contracts containing employee or contracting party information are uploaded to a cloud-based AI model, unauthorized individuals may gain access to this information.

- **Reverse Engineering Attacks:** These attacks can reveal confidential information about a third party included in the contract.

Example: A developer or hacker could use the AI model's outputs to infer sensitive data about a third party, such as payment terms or financial information.

- **Unauthorized Data Access:** This can occur through applications or model programming interfaces (APIs).

Example: If the AI model is linked to a contract management application without adequate security, any unauthorized user could access the stored data.

- **Malicious Use of Generated Content:** For instance, altering or forging contract terms without the knowledge of the parties. (Kelsall et al., 2025)

Example: Someone could modify AI-generated contract clauses, such as changing delivery dates or penalties, without the knowledge of the original parties, causing legal disputes.

Moreover, sharing data with cloud-based AI models may lead to the leakage of sensitive or confidential information, posing a direct threat to confidentiality and legal security (OpenAI, 2023).

4.2.2 Legal Liability Issues

The absence of a clear legal framework defining the liability of parties when using AI models to draft contracts increases the likelihood of legal disputes (Maher, 2025). In cases of errors or legal breaches resulting from reliance on AI outputs, it remains unclear who bears legal responsibility—the developer, the user, or the other contracting parties.

Example: If AI inserts an illegal clause into a contract, it is unclear whether liability falls on the model developer, the lawyer or employee who used the AI, or the contracting parties themselves.

4.3 Risk-Amplifying Factors

The above risks are exacerbated by several key factors, including:

- Lack of transparency in the policies of AI model providers, which makes it difficult to evaluate the reliability and security of the data used (Bender et al., 2021).

Example: Users may not know how the training data were collected, which could lead to the use of unreliable or biased data.

- Insufficient human oversight during the generation of legal texts, increasing the likelihood of producing inaccurate or legally non-compliant clauses. (Kelsall et al., 2025)

Example: Relying entirely on AI without lawyer review may result in ambiguous or legally inconsistent clauses.

- Over-reliance on AI by users without careful legal review (Legal Go, 2025).

Example: An employee using AI to generate an entire contract quickly without legal scrutiny may include clauses that violate local laws.

- Use of inaccurate or outdated training data, which may result in unreliable legal texts or texts that conflict with current legislation (Carneiro-Diaz et al., 2025).

Example: If the model is trained on outdated contracts from before legal updates, it may generate clauses inconsistent with current laws, such as cancellation terms or penalties.

5. Mechanisms for Safely Using Language AI Models in Administrative Contracts

This section reviews effective mechanisms and procedures to ensure the safe and reliable use of language AI models in drafting administrative contracts (Al-Khraisat, 2025). The focus is on protecting sensitive data, maintaining the accuracy of legal texts, minimizing bias, and ensuring compliance with laws and administrative regulations through the integration of AI capabilities with human oversight. (Al-Faraji, 2025)

5.1 Human Legal Supervision

To ensure the quality of legal texts generated by AI models, lawyers or legal specialists should supervise contract drafts. This oversight ensures that the clauses comply with applicable laws and regulations, clarify rights and obligations, and are free from ambiguities that could lead to legal disputes. (Mahmoud, 2023)

It also helps detect any biases or linguistic errors that may affect the legal meaning of the contract, thus protecting parties' rights and ensuring administrative and legal accuracy (Al-Faraji, 2025)

5.2 Use of Reliable Legal Data

The quality of administrative contracts improves when AI models are trained on official legal databases and reliable historical contracts, with regular updates to reflect legal amendments (Kapoor et al., 2024). Using unbiased and accurate training data helps produce fair and precise drafts and reduces the risk of generating texts that may lead to disputes or misinterpretations. (Bender et al., 2021; Metadata Extraction, 2025)

5.3 Integrating AI with Traditional Review Procedures

Legal safety and quality can be enhanced by using AI models to generate preliminary drafts only, followed by careful human review of each clause (Dev, 2024). Analytical tools can be employed to assess linguistic and legal consistency before formally approving the contract, alongside data protection measures to ensure the confidentiality of legal and administrative documents (Open AI, 2023; Legal Go, 2025).

5.4 The Relationship between Legal Language, AI Models, and Contract Protection

Experience shows that combining AI models' linguistic capabilities with human legal review improves contract drafting accuracy, ensures compliance with administrative laws, and reduces time and effort without compromising legal quality. (Maher, 2025)

AI language models do not replace lawyers or administrators but serve as an assisting tool to enhance the accuracy and efficiency of administrative contract drafting, especially when using specialized models trained specifically on legal and administrative texts, thereby minimizing errors and improving legal language precision (Al-Faraji, 2025).

5.5 Data Protection and Privacy

To protect legal and sensitive data when using AI models, data must be secured during training and use through encryption and access control to ensure confidentiality. (Abid, Farooqi, & Zou, 2021; Open AI, 2023)

Recommended procedures include: data anonymization to remove personal information, differential privacy techniques to add synthetic data, strict access controls to limit unauthorized parties, and transparency to inform parties of risks and obtain consent before processing their data (Calamo et al., 2023).

5.6 Addressing Bias and Discrimination

To reduce risks from model bias, training data should be diverse and representative of all legal and social groups, and biased or offensive content should be filtered out before training. (Dev, 2024) Continuous human review of draft contracts ensures they remain free of bias or errors, and fairness indicators such as equitable representation of all parties in contracts should be monitored (Bender et al., 2021).

5.7 Mitigating Weaknesses in Model Design

To address model weaknesses and ensure text compliance with current laws and regulations, models should be updated periodically (Kelsall et al., 2025). Techniques such as adversarial training can prepare models to resist potential attacks, regularization prevents over fitting and improves generalization, fine-tuning with specific legal and administrative data enhances performance in contract drafting, and continuous monitoring and evaluation during actual use allows correction of any errors or emerging biases (Open AI, 2023).

5.8 Practical Examples of Administrative Contract Protection

- **Reviewing Contract Clauses:** Lawyers or legal specialists review AI-generated contracts to ensure clarity of obligations and responsibilities and to eliminate ambiguities that could lead to future disputes (Al-Faraji, 2025).

Practical example: If a model generates a generic clause like "The party shall perform the work in accordance with the contract," the lawyer clarifies the clause to specify precise deliverables, deadlines, and legal responsibilities.

- **Protecting Sensitive Data:** For contracts containing financial or personal information, data encryption and removal of sensitive details are applied to both training data and draft contracts (Abid, Farooqi, & Zou, 2021; Awaisheh et al., 2025).

Practical example: In drafting a contract with a government contractor containing employee information, names, IDs, and financial data are anonymized before entering the model. (Kelsall et al., 2025)

- **Standardizing Legal Terminology:** Using a unified legal terminology dictionary ensures that all contracts generated by the model use precise and consistent language, reducing legal ambiguity and ensuring compliance (Bender et al., 2021).

Practical example: When preparing multiple contracts for similar projects, the dictionary ensures consistent use of terms such as "execution period," "penalties," and "party responsibilities" across all contracts. (Calamo et al., 2023)

- **Multi-level Review:** Combining multiple review levels, including both legal and administrative oversight, ensures that contract clauses are accurate, comprehensive, and compliant with local law (Mahmoud, 2023).

Practical example: After lawyer review, an administrative officer reviews financial and technical clauses to ensure alignment with project budgets and administrative requirements.

- **Training on Updated and Unbiased Data:** Regularly updating models with recent contracts and official legal databases reduces the risk of generating outdated or biased clauses (Metadata Extraction, 2025).

Practical example: When updating a model to include new contracts reflecting recent legal amendments, older contracts containing clauses inconsistent with current regulations are excluded.

6. Conclusion

In the end, the study examined using large language models (LLMs) in drafting administrative contracts, and the associated risks, so to privacy, legal liability, bias, and model design weaknesses, and the measures necessary for administrative contracts data protection, and ensuring the accuracy of legal texts. And it explained that AI represents a powerful tool for promoting the speed and capacity of administrative contract drafting. So, full reliance on these models without human supervision or reliable legal data may lead to legal misconception or potential contractual.

6.1 Results

The study concluded with several key findings, including:

1. That large language models have a tangible impact on improving the quality of administrative contracts.

2. Using large language models helps reduce human errors resulting from legislative confusion, and multiple textual sources, and enhancing clarity, consistency across contract clauses, and meliorating legal drafting accuracy.
3. The models assist in proposing legally consistent alternatives and potential conflicts, thereby improving the overall meliorating legal drafting accuracy of administrative contracts.
4. Enhancing the efficiency of contract preparation through the use of artificial intelligence in creating initial drafts reduces the time and effort required to prepare them without compromising their legal accuracy, especially when combined with specialized human review.
5. Linguistic models involve potential risks, such as ambiguity and legal errors in contract clauses, algorithmic bias, threats to privacy and data protection, and challenges in locating legal liability for errors they generate.
6. The importance of adopting an integrated system of protective mechanisms when using language models in drafting administrative contracts is evident through human legal supervision, reliance on up-to-date and reliable training data, and the integration of artificial intelligence technologies with traditional review methods
7. Developing the efficiency of legal AI models, creating tools to measure fairness and transparency indicators in administrative contracts, and working on designing more secure and reliable specialized language models.

6.2 Discussion

1. Human Legal Supervision: Human supervision is critical factors in ensuring contracts complies with legal requirements and protect the rights of parties. Lawyers' review reduces ambiguity in contractual clauses and mitigates legal risks.
2. Use of Reliable Legal Data: Accurate and up-to-date data ensures fair and consistent drafting and minimizes errors arising from outdated or misleading information.
3. Integration of AI with Traditional Review Processes: Combining automated drafting with human review achieves an optimal balance between efficiency and legal quality, reducing risks associated with AI hallucinations or algorithmic bias.
4. Implementing of Protection measures Data and Privacy, such as encryption, differential privacy, and access control, on the leakage of sensitive legal information and ensures compliance with national and international data protection laws.
5. Addressing Bias and Model Design Weaknesses: Training on diverse datasets, continuous human review, and periodic model updates reduce risks related to errors, bias, and over fitting.

6.3 Recommendations

1. Both of organization, governmental and private, should use AI models solely as supportive tools, with strict legal oversight and periodic review of generated contracts.
2. Continuous updating of data and training is essential, employing modern and diverse legal databases to ensure the accuracy of legal texts and compliance with new legislation.
3. Enhance data protection and privacy through encryption, access control, and randomization before feeding sensitive information into AI models.
4. Employ multi-level review processes by integrating legal and administrative oversight with analytical tools to evaluate the linguistic and legal quality of contracts.
5. Conduct studies to assess model performance in different legal contexts and evaluate the impact of potential biases on fairness and transparency in administrative contracts.

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