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Sattam AI: Bridging the gap between Law and Technology using Design Thinking

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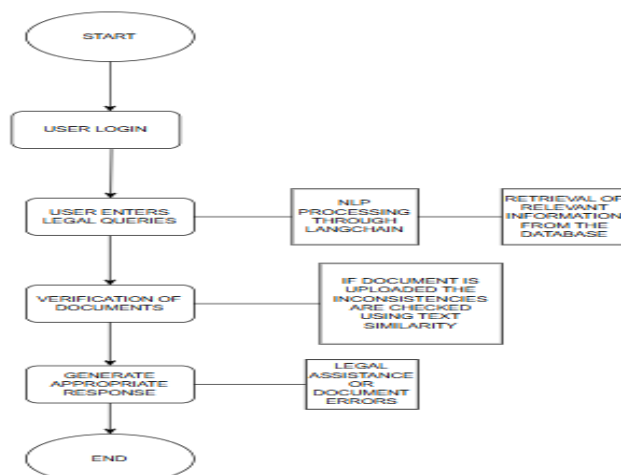
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ABSTRACT: Many people cannot obtain legal assistance because it is typically complex, expensive, and time-consuming. Sattam AI is an AI-powered legal chatbot that offers rapid legal advice and document verification. It assists users in resolving legal inquiries, detecting contract problems, and connecting with verified lawyers by combining Natural Language Processing (NLP) and AI-powered document analysis. The chatbot provides a user-friendly experience by implementing design thinking approaches like empathy mapping and persona construction. While artificial intelligence improves productivity, concerns like as accuracy, privacy, and real-time legal updates persist. Future developments will concentrate on boosting AI precision, security, and multilingual accessibility to close the gap between automation and human legal experience.

I. INTRODUCTION

Individuals and corporations continue to face high costs and complexity when seeking legal aid. The combination of Artificial Intelligence (AI) and Natural Language Processing (NLP) has resulted in legal chatbots that provide instant legal advice, document verification, and compliance checks (Pardhi et al., 2024). AI-driven solutions have shown the ability to improve legal accessibility by providing automated responses and contract analysis, decreasing the need for costly consultations (Queudot et al., 2020). However, issues like jurisdiction-specific legal interpretations, real-time updates, and ethical problems limit their usefulness in complex cases (Morrison & Sherfinski, 2023).

To fill these shortcomings, this study introduces Sattam AI, an AI-powered legal chatbot designed to deliver correct legal advice and document verification. The system provides a user-centric and intuitive experience by incorporating design thinking approaches such as empathy mapping and persona development (Necz, 2023). Furthermore, the chatbot uses AI-powered compliance checks to discover discrepancies in legal papers, improving accuracy and efficiency (Devaraj et al., 2024). While AI improves accessibility, difficulties such as contextual legal analysis, bias identification, and privacy concerns persist. This study examines the system's architecture, operation, and limitations, as well as future improvements in AI-driven legal help.





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II. PROPOSED SYSTEM

1. Legal Query Assistance

Sattam AI uses Natural Language Processing (NLP) to analyze user queries and deliver quick, understandable legal advice, making legal knowledge more accessible.

2. AI-Powered Document Verification.

The chatbot enables users to upload legal papers for AI-driven analysis, which detects missing provisions, compliance concerns, and significant legal hazards to improve document correctness.

3. User-Centred Design

The system was created utilizing design thinking approaches and includes empathy mapping and persona construction to offer a seamless and user-friendly experience.

4. Lawyer Connectivity.

Sattam AI recommends verified lawyers for difficult legal situations based on their specialization and location, allowing users to get competent legal aid when needed.

5. Challenges and Future Enhancements

While boosting accessibility and efficiency, the system poses problems such as real-time law revisions and data privacy concerns. Future enhancements will focus on improving AI accuracy, extending legal datasets, and adding multilingual and voice-based functionality.

III. OPERATION AND SYSTEM FUNCTIONALITY

Sattam AI's operation and functionality concentrate on offering instant legal help and document verification using AI-powered automation. Users can interact with the chatbot to get correct legal advice, which simplifies complex rules into understandable solutions. The system uses NLP to process text-based inquiries and retrieve relevant legal information from a structured database. Furthermore, the AI-powered document verification tool scans uploaded legal papers to identify missing clauses, compliance problems, and other legal hazards. For issues needing professional competence, the chatbot easily connects users with verified lawyers based on their specialization and region. Sattam AI, built on user-centric principles, provides a safe, efficient, and accessible legal help experience, striving to bridge the gap between AI-driven automation and expert legal consultation.

IV. LITERATURE SURVEY

The incorporation of AI into legal technology has resulted in the creation of chatbots that improve legal accessibility by automating responses and assisting with legal research. LegalBot, an AI-powered chatbot, illustrated how NLP-based systems can deliver instant legal advice, minimizing reliance on human lawyers for routine legal questions (Pardhi et al., 2024). Similarly, research on chatbot-based legal help has highlighted their significance in enhancing access to justice by providing real-time legal information, despite issues with accuracy and contextual interpretation (Queudot et al., 2020). However, AI-powered legal tools sometimes lack adaptability to jurisdiction-specific legislation, limiting their usefulness in complex instances requiring legal competence (Necz, 2023).

Beyond advisory powers, AI has been used to analyze legal documents, allowing chatbots to check contracts and identify compliance issues. Document verification models, which highlight missing provisions and legal errors, are emphasized in AI-driven legal systems research (Devaraj et al., 2024). However, ethical and regulatory worries about AI bias and data privacy issues persist (Morrison & Sherfinski, 2023). These studies conclude that, while AI-powered legal chatbots improve productivity, gaps in interpretation, real-time updates, and legal oversight must be addressed. Sattam AI expands on these discoveries by combining intelligent legal aid and AI-powered document verification, bridging the gap between automated and professional legal consultation.

V. SATTAM AI CHATBOT

Sattam AI is intended to give instant, dependable, and user-friendly legal advice via an advanced AI-powered chatbot. Built with Natural Language Processing (NLP), the system reads user questions, obtains relevant legal information, and provides precise results clearly and simply. Unlike typical legal searches, which take significant reading and interpretation, Sattam AI speeds up the process by providing direct answers, legal explanations, and actionable insights. Whether

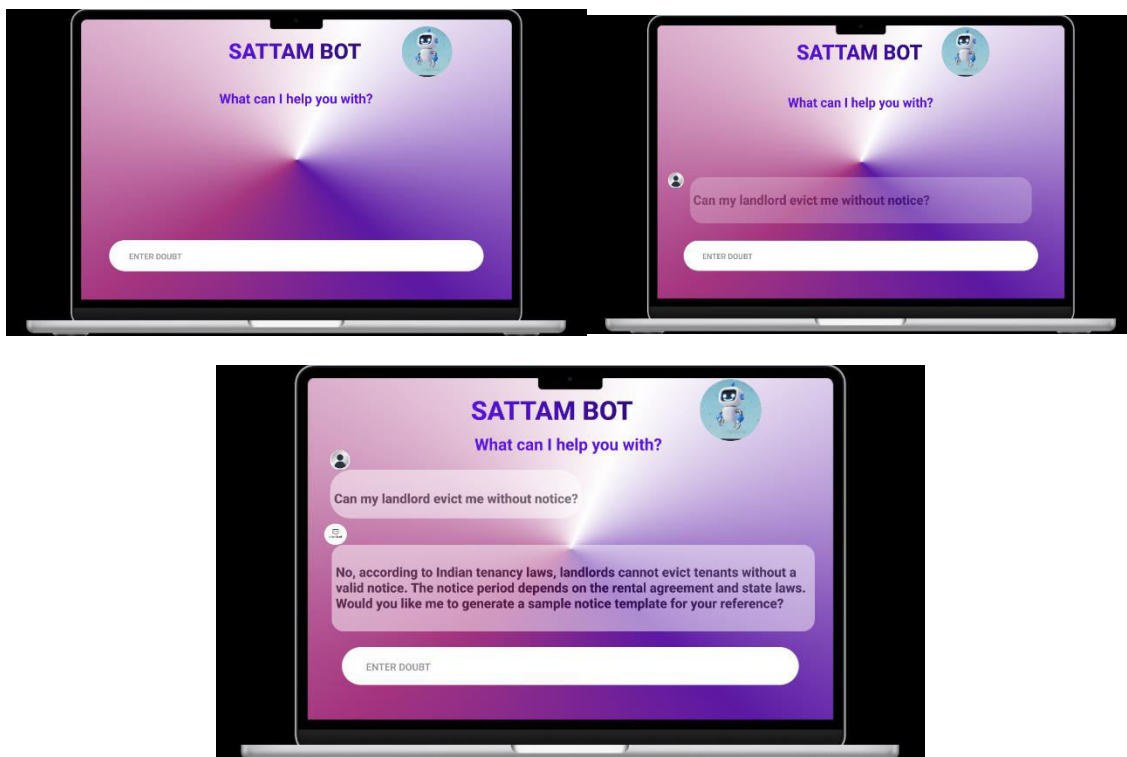


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customers need clarification on tenant rights, contract conditions, or legal procedures, the chatbot provides prompt and context-aware responses, making legal information more accessible.

The chatbot is designed to handle a wide range of legal concerns, including general legal questions, step-by-step procedural guidance, and legal definitions. Furthermore, its adaptive learning mechanism continuously refines responses depending on user interactions, resulting in increased accuracy over time. Its human-centric design avoids dense legal jargon, ensuring that users, regardless of legal expertise, receive simple, intelligible, and legally sound information. To increase credibility, users can cross-check chatbot responses with legal experts via integrated lawyer connectivity, bridging the gap between AI assistance and professional legal advice.



VI. SATTAM AI DOCUMENT VERIFICATION

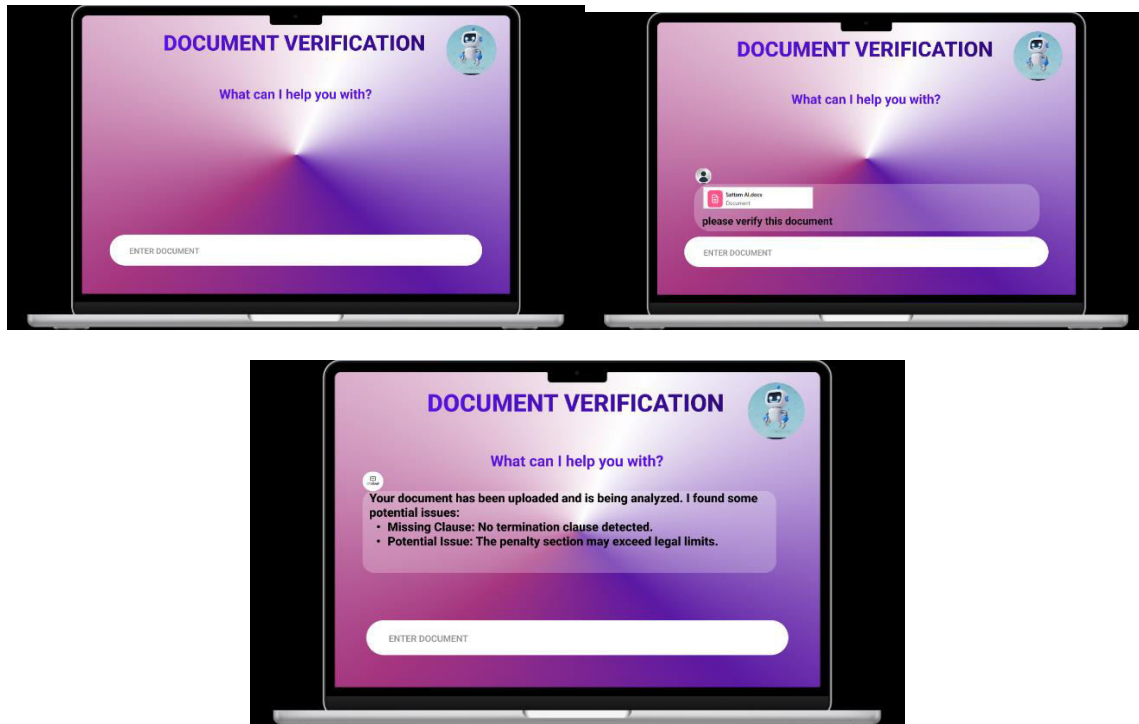
Sattam AI includes an intelligent document verification system that analyzes legal papers accurately and efficiently. Using AI-powered text analysis and compliance checks, the system scans uploaded contracts, agreements, and policies for missing terms, inconsistencies, and potential legal issues. This reduces the ambiguity that comes with manually analyzing legal papers, allowing users to immediately identify compliance gaps and areas of concern. Whether checking a rental agreement, business contract, or legal affidavit, the system conducts a thorough examination to ensure that documents meet legal requirements.

Unlike traditional document review, which needs substantial legal knowledge, Sattam AI makes legal verification available to everybody. The system checks uploaded papers against specified legal frameworks and industry best practices, identifying portions that may need to be modified. It also provides suggestions for improvement, assisting users in improving legal accuracy while lowering the danger of a conflict. Sattam AI enables customers to handle their legal material with confidence while adhering to legal requirements by combining automated document verification with AI-driven legal insights.



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VII. DRAWBACKS OF THE PROPOSED SYSTEM

Despite its ability to improve legal accessibility and document verification, Sattam AI has some drawbacks that impact its overall trustworthiness. One of the most significant issues is a lack of contextual legal interpretation since AI struggles to completely understand the nuances of case-specific legal scenarios. While the chatbot delivers generic legal advice, it may not always account for jurisdictional differences, legal precedents, or complicated contractual clauses that necessitate human intervention. Furthermore, the system is based on predetermined datasets and legal frameworks, which may result in outdated or partial results if not routinely updated with the most recent legal changes.

Another major disadvantage is the lack of human intuition and ethical reasoning, which are critical in legal decision-making. AI's inability to discern intent, negotiate legal terms, or provide individualized legal strategy limits its usefulness in high-stakes legal cases. Furthermore, worries about data privacy and security arise since users must upload important legal papers for verification. Ensuring strong encryption, complying with data protection requirements, and preserving user confidence are all big challenges. Addressing these restrictions will be critical to making AI-powered legal help more comprehensive, accurate, and broadly accepted.

VIII. APPLICATIONS OF THE SYSTEM

Sattam AI provides a wide range of applications, changing legal accessibility, contract verification, and legal compliance across multiple industries. Individuals can use the chatbot to get fast legal advice on matters including consumer rights, rental agreements, and employment policies, which eliminates the need for costly legal consultation. AI-driven contract assessment benefits small firms and startups by verifying that their agreements meet legal criteria while avoiding risk. Furthermore, experts in the real estate, banking, and corporate sectors can utilize the document verification system to identify any legal loopholes, missing clauses, or regulatory noncompliance before signing contracts.

Beyond personal and commercial applications, Sattam AI has enormous promise for government agencies, educational institutions, and legal assistance organizations. It can help government agencies automate legal inquiries, reduce administrative workloads, and increase citizen engagement. Law schools and research institutions can use the chatbot to gain quick access to legal references and case laws, thereby improving legal education. Furthermore, non-profit legal aid



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organizations can use Sattam AI to deliver free, AI-powered legal services to impoverished populations, ensuring that access to justice is not hampered by financial restraints.

IX. CONCLUSION

Sattam AI marks a big step forward in AI-powered legal help, providing a seamless and accessible solution for legal queries and document verification. The solution improves the efficiency, affordability, and accuracy of legal counsel by combining Natural Language Processing (NLP) and AI-powered compliance checks. While it simplifies complex legal processes, issues persist with contextual interpretation, real-time law updates, and data security. However, with ongoing improvements to AI learning models, expert oversight, and multilingual support, Sattam AI can bridge the gap between automation and human competence, making legal help more inclusive, dependable, and widely available.

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