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AI-POWERED CONTRACT RISK SCORING: THE DEVELOPMENT OF A CONTRACT RISK SCORING ENGINE

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Abstract

This article describes the creation and deployment of an artificial intelligence Contract Risk Scoring Engine, a transformative solution that has generated revenue through its innovative approach to contract analysis. The system automatically identifies and evaluates high-risk clauses and terms in both legacy and current contracts using advanced machine learning techniques and natural language processing. The solution significantly improves analysis accuracy compared to traditional manual review processes through the implementation of custom AI models specifically trained on contract language. The system is positioned as a cornerstone of modern contract intelligence through its sophisticated risk assessment framework, weighted scoring algorithms, and seamless integration capabilities. This article explores the technical architecture, model training methodology, and practical implementation challenges while also examining the broader business impact and market implications of introducing AI-driven risk assessment to contract management. The success of this initiative not only demonstrates the practical application of AI in legal technology but also provides valuable insights into the development of enterprise-scale machine learning solutions that drive significant business value.

Author Keywords

Contract Intelligence, Risk Assessment Automation, Natural Language Processing (NLP), Machine Learning Models, Legal Technology Innovation.

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Reference

[1] Jay Ghatge, "AI Contract Review vs. Traditional Contract Review: A Comparative Analysis," *SpeedLegal*, 17 July 2024. [Online]. Available: <https://speedlegal.io/post/ai-contract-review-vs-traditional-contract-review-a-comparative-analysis>

[2] Kira Systems, "AI-Driven Contract Analysis in Perspective and in Practice," 2020. [Online]. Available: <https://kirasystems.com/files/ebooks/KiraSystems-Ebook-AiDrivenContractAnalysis.pdf>

[3] Makam Ganesh Kumar, "The Impact of Smart Contracts and AI on Traditional Contract Law in India," *International Journal of Law Management and Humanities*, vol. 6, no. 3, 2023. [Online]. Available: <https://www.ijlmh.com/wp-content/uploads/The-Impact-of-Smart-Contracts-and-AI-on-Traditional-Contract-Law-in-India.pdf>

- [4] "10 Challenges Contract Management is Facing and How to Overcome Them," Sievo Blog, 22 August 2023. [Online]. Available: <https://sievo.com/blog/10-challenges-contract-management-is-facing-and-how-to-overcome-them>
- [5] H. Surden, "Chatgpt, AI Large Language Models, and Law," *Fordham Law Review*, vol. 92, March 2024. [Online]. Available: https://fordhamlawreview.org/wp-content/uploads/2024/03/Vol.-92_Surden-1941-1972.pdf
- [6] Wilver Auccahuasi et al., "Methodology for the Use of Machine Learning, Applied in Predicting the Level of Success in Legal Cases," *CEUR Workshop Proceedings*, vol. 3146, 2022. [Online]. Available: https://ceur-ws.org/Vol-3146/PAPER_06.pdf
- [7] David C. Simmons et al., "Qualitative and quantitative approaches to risk assessment," *DRMKC*. [Online]. Available: https://drmkc.jrc.ec.europa.eu/portals/0/Knowledge/ScienceforDRM/ch02/ch02_subch0201.pdf
- [8] Muhammad Ashraf Faheem, "AI-Driven Risk Assessment Models: Revolutionizing Credit Scoring and Default Prediction," *IRE Journals*, vol. 5, no. 3, September 2021. [Online]. Available: <https://www.irejournals.com/formatedpaper/1702907.pdf>
- [9] Precia Jacey, Siti Yuniarti, "Artificial Intelligence: Implementation in Legal Services," *IEOM Society*, September 2022. [Online]. Available: <https://ieomsociety.org/proceedings/2022malaysia/354.pdf>
- [10] Michael Felderer and Rudolf Ramler, "Quality Assurance for AI-based Systems: Overview and Challenges," *ResearchGate*, February 2021. [Online]. Available: https://www.researchgate.net/publication/349195521_Quality_Assurance_for_AI-based_Systems_Overview_and_Challenges
- [11] FSB, "The Financial Stability Implications of Artificial Intelligence," *Financial Stability Board*, 14 November 2024. [Online]. Available: <https://www.fsb.org/uploads/P14112024.pdf>
- [12] Manupatra Academy, "AI Adoption and Its Impact in the Legal Industry: An Indian Perspective." [Online]. Available: <https://www.manupatracademy.com/assets/pdf/AI-Adoption-and-Its-Impact-in-the-Legal-Industry-An-Indian-Perspective.pdf>
- [13] Jan Hill, "The Future of Legal Technology," *Lawmatics*, 27 December 2023. [Online]. Available: <https://www.lawmatics.com/blog/future-of-legal-technology/>
- [14] Spherical Insights, "Global Legal Technology Market Size, Share, and COVID-19 Impact Analysis, By Solution, By Type, By End-User, By Region, Analysis and Forecast 2022 - 2032," 2023. [Online]. Available: <https://www.sphericalinsights.com/reports/legal-technology-market>