

International Conference on **Artificial Intelligence and Cloud Computing (ICAICC-2025)**

Conference Proceedings

May 10, 2025 (Virtual)

The Future of InsurTech: Evaluating Blockchain and Smart Contracts for Automating Claims Processing and Improving Policyholder Trust

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The rapid evolution of InsurTech is transforming the insurance industry through the integration of blockchain technology and smart contracts. This study evaluates how blockchain's decentralized, transparent, and tamper-resistant ledger enhances policyholder trust while smart contracts automate claims processing, reducing fraud, administrative costs, and processing delays. By leveraging distributed ledger technology (DLT), insurers can ensure secure data sharing, streamline underwriting, and enable real-time claim settlements with greater accuracy and efficiency. The research explores key challenges, including regulatory compliance, scalability, and interoperability, while highlighting innovative use cases that demonstrate the potential of blockchain-driven insurance solutions. Additionally, ethical considerations and the role of AI in enhancing blockchain-based automation are discussed. The study concludes that blockchain and smart contracts have the potential to revolutionize InsurTech by improving operational efficiency, fostering transparency, and strengthening trust between insurers and policyholders in an increasingly digital insurance ecosystem.