Data Driven Analysis of Insurance Claims Using Machine Learning Algorithm

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Abstract: *The insurance industry is undergoing major changes with the integration of big data and artificial intelligence technologies. The design and research of an insurance survey claims system based on big data analysis aims to improve the efficiency and accuracy of insurance claims processing. The system uses image recognition, computer vision systems, language recognition, and other AI technologies to analyze case information and accelerate the speed of insurance claims settlement. The system also includes an intelligent customer service feature that uses AI algorithms such as language processing and big data statistical analysis to provide processing suggestions to policyholders. The system implements an individualized insurance service that collects, stores, and analyzes data on policyholders to create personalized insurance products and perform precise marketing. Big data analysis in the insurance personalized service primarily uses association rule analysis, classification and clustering analysis, and change and deviation analysis to improve the service. The one-click reporting function simplifies the reporting process for policyholders, allowing them to report a case from anywhere at any time. The intelligent claims processing feature separates liability in claims cases and deals with non-controversial cases through the use of AI, shortening the processing time and reducing manpower costs. The insurance survey and claim system has undergone five iterations under an agile development model and has achieved the goals of personalized insurance services, one-click reporting, intelligent claims processing, and intelligent customer service. The practical application results demonstrate that the system can improve the efficiency and accuracy of insurance claims processing while also providing policyholders with a more convenient and personalized experience. In conclusion, the design and research of an insurance survey claims system based on big data analysis has the potential to revolutionize the insurance industry and greatly benefit both insurance companies and policyholders.*

Keywords: Insurance Industry

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