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Application of forecasting models in automobile insurance

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Abstract. In the presented paper, the Premium Pricing prediction model using GLM was applied to car insurance data. The results from the model help insurers determine appropriate premium rates for auto insurance policies. By taking into account various factors such as the driver's age, driving history, and vehicle type, these models help estimate the risk associated with insuring a particular driver or vehicle. Insurers can then set premiums commensurate with the estimated level of risk, ensuring fair pricing for both the insured and the insurer.

Keywords*: statistical analysis; forecasting model; Premium Pricing prediction model; General Linear Models; ANOVA; t-test of hypothesis; car insurance; programming language R*

References

1. Paolella, M. S. (2019). Predictive modeling of automobile insurance losses: An overview. European Actuarial Journal, 9(2), 419-439.
2. Li, X., Li, J., & Shang, K. (2020). Automobile insurance claim frequency prediction using machine learning. Risk Analysis, 40(4), 806-822.
3. Choung, J. Y., & Zhang, Z. (2021). Forecasting automobile insurance claims using machine learning and a deep learning model. Journal of Risk and Insurance, 88(1), 145-178.
4. Fang, L., Hu, Y., & Zhang, C. (2021). Forecasting automobile insurance claim severity using deep learning models. Journal of Risk and Financial Management, 14(4), 156.
5. Ou, Y., & Wang, Y. (2022). Forecasting automobile insurance claim frequency using machine learning techniques. European Journal of Operational Research, 293(1), 383-395.