

Knowledge discovery from VNPT's customer database to predict customer churn and service cancellation.

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Abstract: This study presents a knowledge discovery framework applied to the customer database of VNPT to predict customer churn. Leveraging data mining techniques, the research analyzes historical customer data, including service usage patterns, billing history, complaint logs, and demographic information. The methodology involves data preprocessing, feature selection, and the application of classification algorithms such as decision trees, random forests, and neural networks to build predictive models. Experimental results demonstrate that the proposed models achieve high accuracy in identifying customers with a high propensity to discontinue or cancel their services. Key predictive factors are identified, offering actionable insights for customer retention strategies. The findings enable VNPT to proactively target at-risk customers with tailored interventions, thereby reducing churn rates and enhancing customer relationship management. This work contributes to the practical application of data mining in the telecommunications sector, providing a robust approach for leveraging existing customer data to support strategic decision-making.

Keywords: knowledge discovery, customer churn prediction, VNPT, customer database