Abstract

Data mining in direct marketing aims at identifying the most promising customers to send targeted advertising. Traditionally, statistical models are used to make such a selection. The
success of statistical models depends on the validity of certain assumptions about data distribution. Artificial intelligence inspired models, such as genetic algorithms and neural networks, do not need those assumptions. In this paper, we test neural networks with real-world direct marketing data. Neural networks are used for performance maximization at various mailing depth. Compared with statistical models, such as logistic regression and ordinary least squares regression, the neural network models provide more balanced outcome with respect to the two performance measures: the potential revenue and the churn likelihood of a customer. Given the overall objective of identifying the churners with the most revenue potential, neural network models outperform the statistical models by a significant margin.

Reference

Improving Direct Marketing Profitability with Neural Networks


Index Terms

Computer Science

Information Sciences

Key words

Neural networks data Mining direct Marketing profit modeling