

Paper Summary 6

Paper number	6
Read by	Atman Hapani
Title of paper and author details	<p>Predicting customer retention and profitability by using random forests and regression forests techniques</p> <p>Authors – Bart Larivière and Dirk Van den Poel</p>
Publication year, publication body	<p>2005</p> <p>Published in <i>Expert Systems with Applications</i>.</p>
Domain of paper [sentiment analysis/ ontology construction...etc]	Customer Retention and Profitability Prediction in the field of Data Mining and Customer Relationship Management (CRM).
Dataset used/ Data sources [if any]	The dataset includes a sample of 100,000 customers from a European financial services company. It comprises demographic information, transaction history, and profitability scores over a period.
Implementation tools/ technologies used [if any]	Random Forest Regression Forest

Results given and evaluation parameters used	<p>The study evaluates its models using AUC for binary classification (retention) and MAD for continuous outcomes (profit evolution), with random forests showing superior performance across these metrics.</p>
Highlights/summary of paper in your words	<p>The study shows that past customer behavior is a significant predictor of repeat purchases and profitability evolution.</p> <p>Intermediary roles have a greater impact on customer defection.</p> <p>The use of random forests improves prediction accuracy for customer outcomes compared to traditional statistical methods.</p>
Future enhancements suggested	<p>The paper suggests further exploration into hybrid models and deep learning techniques to potentially increase prediction accuracy and performance in real-world applications.</p>