

# Reject Inference and Survival Modelling

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The literature suggests that the commonly used augmentation method of reject inference does little to alter the ranking performance of application scorecards, but it does improve the ability to detect an appropriate cut-off score. In this paper we examine whether the use of augmentation will improve the ranking of applicants in terms of default for various time frames, using survival analysis. The paper will further examine whether use of this method of reject inference can improve profitability by improving the knowledge of when default will occur. An accept-reject model is built to determine the sampling probabilities that will be used to weight each accepted case in the estimation of survival probabilities. The expected mean profits of a portfolio using this technique will be compared with the corresponding values for an accepts only model.