

Human Resources Predictive Analysis: Understand Factors of Employee Attrition

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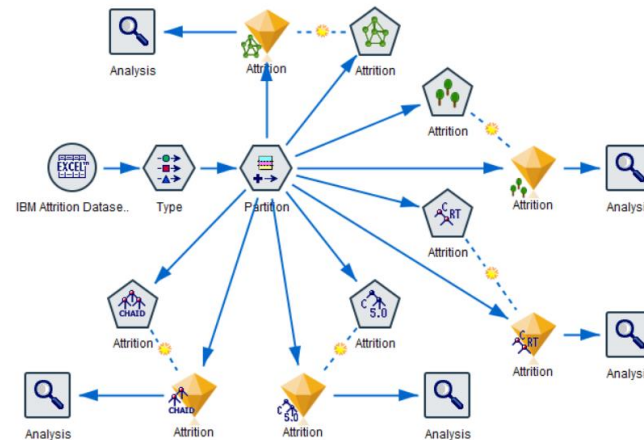
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Abstract

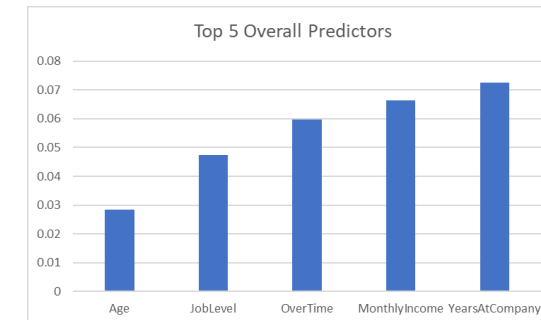
One of the biggest challenges for Human Resource in any company is the rate at which employees leave the company. This is known as the attrition rate. The goal for HR is to keep the rate as low as possible. Decision makers within a firm want to keep the rate low due to the high cost of finding, hiring and training new employees. It is important to understand the factors which impact attrition to develop solutions to keep the rate low.

IBM SPSS Modeler

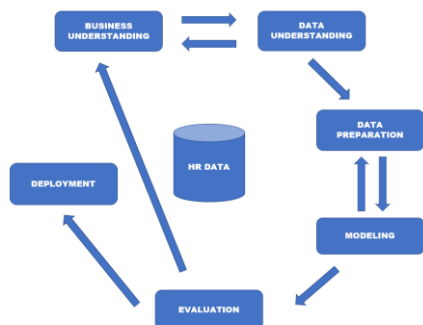


Results

After constructing and evaluating the different models, the key predictors were identified. An Information Fusion-Based Sensitivity Analysis was performed to determine the overall strongest predictors of attrition.



CRISP-DM Methodology



Model Performance Evaluation

	Accuracy	Sensitivity	Specificity	Precision
Random Trees	0.835	0.261	0.975	0.718
C&R Trees	0.815	0.17	0.972	0.6
C5.0	0.835	0.272	0.972	0.705
CHAID	0.822	0.261	0.958	0.605
Neural Net	0.846	0.306	0.977	0.771

Conclusion

The Information Fusion-Based Sensitivity Analysis led to determining the top 5 key predictors of attrition are Age, Job Level, Overtime, Monthly Income and the Number of Years at the Company.

It is recommended the Human Resources decision makers use predictive modeling to assist in lowering attrition rate.