EAR-SYS - AN ENSEMBLE APPROACH USING SUPER LEARNER FOR EMPLOYEE ATTRITION PREDICTION AND RETENTION SYSTEM

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ABSTRACT

Employee attrition has become a major concern for organizations, and retaining employees has become crucial for their success. This project proposes an ensemble approach using the Super Learner technique, EA-Sys, for employee attrition prediction and retention system. This project aims to develop a model that predicts employee attrition with high accuracy and provides insights for retention strategies.

To achieve this goal, the author used various machine learning algorithms, including logistic regression, decision trees, random forests, and support vector machines, and combined them using the Super Learner technique. The dataset contains information about employees' demographics, job satisfaction, performance, and other relevant factors.

The experimental results show that EA-Sys outperforms the individual models and other ensemble techniques in terms of accuracy and predictive power. The author also conducted feature importance analysis to identify the most significant factors that influence employee attrition. The findings suggest that factors such as job satisfaction, work-life balance, and career growth opportunities are crucial for employee retention.

The proposed model can be integrated with HR systems to monitor and predict employee attrition in real-time. This can help organizations to identify at-risk employees and take necessary actions to retain them. The insights provided by our model can also help organizations to design effective retention strategies and improve employee satisfaction and productivity.

In conclusion, this project demonstrates the effectiveness of the Super Learner approach in employee attrition prediction and retention. The findings contribute to the body of knowledge by providing insights into the factors that influence employee attrition and retention. The proposed model has practical implications for HR managers and can help organizations to retain their valuable employees and achieve their strategic goals.

Keywords: Employee Attrition, Employee Churn, Machine Learning, Prediction System, Human Resource, Ensemble Method, Retention Strategies, Super Learner