

Artificial Intelligence Based Predictive Analysis to Gain Valuable Insights into Employee Performance and Engagement

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Abstract

In this study aims to utilize AI-based predictive analysis to gain valuable insights into employee performance and engagement. By analyzing the interconnected relationships between foundational organizational pillars, the research seeks to build a predictive model that anticipates workforce turnover, motivation levels, and overall productivity.

Methodology: A quantitative survey methodology was deployed to collect data from institutional faculty and staff. The questionnaire comprises five distinct sections: Demographic Information (including gender, age, qualification, designation, department, experience, employment type, and salary range) and four 5-point Likert scale sections evaluating Job Satisfaction, Training, Leadership, and Work-Life Balance. Advanced machine learning algorithms—such as random forests, support vector machines, and neural networks—will be applied to the dataset. These models will treat Job Satisfaction and Engagement as dependent variables, while using demographics, training adequacy, leadership efficacy, and work-life balance as predictive features.

Keywords

Artificial Intelligence, Employee, Predictive analysis, Educational Institution.