

LITERATURE SURVEY

1.Intelligent Placement Model Based On Decision Tree

The paper "Intelligent Placement Model Based On Decision Tree" presented at the 2018 9th International Conference on Information Technology in Medicine and Education proposes a decision tree-based model for student placement in primary and secondary schools. The model aims to address the challenge of matching students with appropriate teachers by analyzing students' characteristics and academic performances. The research explores the limitations of current placement methods, such as randomness, ranking, and balance, and highlights the need for a more effective approach. It introduces the use of decision tree algorithms, specifically ID3 and C4.5, to analyze student data and improve matching accuracy.

Key components of the paper include:

1.Introduction: Discusses the complexity of the education system and the ongoing challenge of student placement.

2.Related Work: Reviews previous attempts to solve the placement problem using clustering and other methods.

3.Basic Knowledge: Introduces decision trees and entropy as fundamental concepts for classification algorithms.

4.Decision Tree Based on Placement Model: Describes the decision tree model and its application to the placement problem.

5.Experimental Result: Presents the results of experiments using the ID3 and C4.5 algorithms, demonstrating high accuracy in student placement.

6.Discussion and Conclusion: Summarizes the findings and proposes the decision tree-based model as a solution to the student placement problem.

The paper concludes that decision tree algorithms, particularly when used in combination with pruning techniques, offer a promising approach to improving student-teacher matching in primary and secondary education settings. As for your request for a literature survey, the references provided at the end of the paper offer a comprehensive overview of related research and studies in the field of artificial intelligence in education. These references cover topics such as the integration of AI in education, decision tree models, SVM classification methods, and factors influencing student injury occurrence.

The literature review provides insights into the existing research and applications related to predictive modeling and student performance analysis in the field of education.

2.PPS-Placement Prediction System Using Logistic Regression.

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Abstract:

The paper presents the development of a Placement Prediction System (PPS) using a logistic regression model. The system utilizes student scores in matriculation, senior secondary, subjects in various semesters of technical education, and demographics to predict student placement in upcoming recruitment sessions. Using past academic and in-house placement data from Guru Nanak Dev Engineering College (GNDEC), Ludhiana, the paper outlines the steps involved in designing and building the logistic regression model. Machine learning techniques are employed to analyze student performance and support research in this domain. The model, implemented using GNU Octave programming, achieves promising accuracy of 83.33% in testing. Insights gained from the model parameters aid the Training and Placement Office (TPO) in informed decision-making, enhancing the placement probability for targeted students.

Index Terms: Placement prediction, Logistic regression, Classification tool, Student performance analysis.

Summary:

The paper introduces a Placement Prediction System (PPS) based on logistic regression, which forecasts student placement probabilities using academic scores and demographic data. It discusses the methodology of model development, emphasizing data cleaning, feature selection, and logistic regression implementation. The study draws from past academic and placement data of GNDEC to train and test the model, achieving notable accuracy. The results provide insights into student performance and industry demands, enabling targeted interventions by the TPO. The paper concludes with future directions to enhance the model's accuracy and applicability.

3.Student Placement Chance Prediction.

Authors: Mrs. J. Samatha, D. Manjusha, B. Pooja, A. Usha

Abstract:

The paper discusses the development of a placement chance predictor to assist pre-final year engineering students in understanding their placement prospects. Leveraging data mining and deep learning, the research proposes a predictive model to estimate a student's likelihood of being placed in a specific company or category.

Introduction:

The introduction highlights the growing demand for qualified IT professionals in India and the challenges students face in securing placements. It emphasizes the importance of institutions in preparing students for job placements and introduces the concept of a placement prediction system as a solution.

Literature Survey:

The literature review covers various studies and models related to student placement prediction, focusing on machine learning and data mining approaches. Key works include those employing algorithms like decision trees, Naïve Bayes, K-Nearest Neighbors, logistic regression, and more for predicting placement outcomes.

Overview of the System:

The existing system faces challenges in ensuring maximum placement opportunities for students. The proposed system advocates for the use of deep learning tools to effectively filter students based on their details and historical placement statistics. The system aims to aid institutions in preparing placement prediction lists for current students.

Implementation Functional Requirements:

The paper outlines the necessary functionalities of the proposed system, including admin login, dataset uploads, student registration, exam taking, and prediction generation.

Results:

Results include visual representations of student datasets, question dataset uploads, and viewing questions, demonstrating the practical aspects of the system.

Conclusion:

The research concludes that student datasets are valuable resources for predicting future placement chances. It suggests that such predictions can help students identify areas for improvement and institutions plan academic strategies to enhance placement statistics.

Future Work:

Suggestions for future work include curriculum updates based on industry requirements and predicting company preferences for different student categories to enhance prediction accuracy.

References:

The paper cites relevant literature and research works in the field of student placement prediction, providing a foundation for the study.

Overall, the paper offers insights into the development of a placement prediction system using deep learning techniques and emphasizes the importance of data-driven approaches in improving student placements.

4.Student Placement Analyzer: A Recommendation System Using Machine Learning.

Authors: Senthil Kumar Thangavel, Divya Bharathi P, Abijith Shankar.

This research paper presents a recommendation system called "Student Placement Analyzer" that utilizes machine learning techniques to predict the placement status of students in higher learning institutions, specifically those pursuing B.Tech degrees. The system aims to assist educational institutions in improving their placement performance by identifying prospective students and providing them with targeted support to enhance their technical and interpersonal skills.

Introduction: It emphasizes the importance of placement prediction for students and institutions alike, highlighting the significance of high placement rates for the reputation of educational institutions.

Materials and Methods:

Machine Learning: Discusses the role of machine learning in predictive modeling and decision-making processes.

Decision Tree Learning: Explains how decision trees are used for predictive modeling in data mining and machine learning.

Scikit-Learn: Introduces Scikit-learn, an open-source machine learning module in Python, and its various algorithms for classification, clustering, and regression.

Background and Related Work: Provides a summary of related studies and methodologies in the field of student placement prediction.

Logistic Regression: Briefly describes logistic regression as a probabilistic view of classification and its application in predicting discrete outcomes.

Implementation of Machine Learning Model: Details the implementation process using Python and Scikit-learn, including data preparation, selection, transformation, and model fitting.

Results: Presents the results of the prediction model on test data, accuracy measurements, comparison with real-world data, and analysis of different classifiers.

Discussion: Analyzes the accuracy and efficiency of the system, compares results with other data analysis tools, and discusses the significance of decision tree learning in placement prediction.

Conclusion: Summarizes the achievements of the study in predicting student placement statuses and emphasizes the system's potential to improve placement rates and institutional reputation.

References: Lists relevant sources and studies cited throughout the paper.

Overall, the research paper introduces a practical recommendation system powered by machine learning techniques, providing insights into student placement prediction and its implications for educational institutions.