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PREDICTION OF STUDENT PERFORMANCE BASED ON TEXT MINING USING NEURAL NETWORK – A REVIEW

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ABSTRACT—To determine the importance and impact of a student's background, student community work, and student performance in predicting student performance. Demonstrate the flow of a student performance prediction structure that describes the categories of learners so that you can accurately articulate your learning ability. The paper discusses on the various algorithms used for predicting the students performance.

KEYWORDS **–** Linear Regression, Neural Network, Text Mining ,Performance, Education,Prediction

I. INTRODUCTION:

Students are facing competition and their main concern is analyzing their test performance. With the help of data mining techniques we can collect data to analyze and predict students' strengths and weaknesses which will help to improve in their future assessments. Most important datas like Previous assessment scores, students background and social activities are taken for initial student analysis.

II. LINEAR REGRESSION ALGORITHM:

In order to predict the outcome of the student's academics, a supervised dataset is created to predict the outcome linear regression algorithm is used. It is mostly used for predicting students' strengths and weaknesses with the help of student's previous test performance and social activities. Which will help students to assess their performance in every assessment and will improve in future.

III. SURVEY ON EXISTING SYSTEMS:

S.NO	AUTHOR	METHODOLOGIES	ADVANTAGES	DISADVANTAGES
1	Pengfei Wan , Xiaoming Wang , Xinyan Wang , Liang Wang , Yaguang	In order to intervene in the information dissemination process, we consider the	● Streamlined and decoupled services ● Effectively improve	● The amount of iteration calculation in the network is large.

	Lin , Wei Zhao	dynamic constraints of the intervention strategy and propose a more constrained intervention model. Then, to reduce the system loss of the intervening spread, we set up a constrained optimal control problem to achieve optimal allocation of intervention strategies over time and minimize the loss function.	prediction accuracy. ● Maximum Utilization of Unstructured Data.	● Difficult to be used in large-scale parallel computing. ● Cannot meet current network business demands
2	Po-Hsuan Lin , Andrew Wooders , Joseph Tao-Yi Wang , Walter M. Yuan	A self-monitoring correction mechanism to learn all intrinsic structures of human poses from abundant images. Driven by computer vision and robotic applications, recovering 3D human poses has become a growing problem	● Reveal the highly nonlinear Relationship Improved reliability and resilience ● Easy scalability Maximizes the complexity of the problem Inaccurate models lead to systems that under- or over-perform Can't learn relation between factors.	● Maximizes the complexity of the problem ● Inaccurate models lead to systems that under- or over-perform ● Can't learn the relation between factors.
3	Ismail Aburagaga , Mary Agoyi , Islam Elgedawy	WiMose is the first 3D system for estimating the poses of moving humans. Previous WiFi-based work has achieved 2D and 3D pose estimation. WiMose can find key points in 29.7 mm and 37.8 mm procrustes analysis per joint position error (PMPJPE). This provides better performance than state-of-the-art methods. Merge channel state	● Reduce resource consumption while meeting reliability demands. ● Effectiveness for distributed optimization . ● Easy scalability.	● Difficult to be used in large-scale parallel computing. ● Models are very costly to train ● Diminishing returns in performance.

		information (CSI) amplitude and phase with CSI throughout space An image that can provide both pose and position information.		
4	Zhongcheng Lei , Hong Zhou , Wenshan Hu , Qijun Deng , Dongguo Zhou , Zhi-Wei Liu , Xingran Gao	Aims to recover the 3D locations of human skeleton joints from input depth images or point clouds. Develops a weakly supervised adversarial learning framework for 3D human pose estimation. Adopts 2D CNN to extract 2D human joints from the input depth image. Experiments with ITOP datasets and EVAL show that our method can efficiently achieve the highest performance	● Simple to understand and interpret. ● Can improve the worst-case performance . ● Works with a very high degree of confidence.	● It is not an easy-to-use method ● Significantly increases capital and operating expenditures ● This system is Opportunistic and uncontrollable
5	Zhongcheng Lei , Hong Zhou , Wenshan Hu , Guo-Ping Liu	Estimating a human pose in 3D from a monocular RGB image is a difficult task in computer vision. In this article, I will introduce you to generative arts. A convolutional network that further improves the performance of 3D human pose estimation. Hostile Network for 3D Human Pose Estimates to Learn Plausible 3D Humans (GAN) Expression by hostile training. Graph Convolutional Network	● It is a fast and easy procedure to perform. ● Reduces the consumption of hardware resources. ● Can achieve incredible accuracy.	● Diminishing returns in performance. ● Low Accuracy with Dissimilar Features ● Unpredictability in the training is higher

		(GCN) with both generators and discriminators. Combination of GAN and GCN. Promote networks to predict more accurate 3D joint position		
6	Pedro Juan Martnez , Francisco Javier Aguilar , Mario Ortiz	Recent successes in neural networks have significantly improved the performance of 3D human poses. This paper proposes view-invariant 3D. A human pose estimation module to mitigate the effects of different perspectives. The framework consists of a base network that provides an initial estimation of 3D poses and a view invariant hierarchy correction network (VIHC) for learning to improve 3D poses	● Simplicity and Explainability. ● It is a fast and easy procedure to perform. ● It provides easy information processing and cost reduction as well.	● Difficulties to obtain better performance ● Cannot reduce the variance of predictions; therefore cannot reduce generalization error. ● Higher correlation in prediction errors
7	Khairan D. Rajab	This paper presents a 3D hierarchical method for estimating human poses using a monocular camera. The method achieves a qualitatively natural reconstruction result of 3D poses in real video. It's better than some cutting-edge methods, which require either extensive training data or high computational complexity to be high. We use the labeled 3D training data to formulate the torso estimates as	● Simple to understand and interpret. ● Built-in error handling. ● Loss function is optimized.	● Fall into the local optimum, and a long training period. ● Prone to Errors ● Higher prediction complexity with higher dimensions

		Perspective NPoints (PNPs). Problems and limbs represent estimation as an optimization problem and construct a high-rise structure hierarchically. Torso estimation as a PNP problem provides a very efficient solution.		
8	Cheng Wang , Bo Yang , Jipeng Cui , Chaodong Wang	Human pose tracking has become an important topic in computer vision (CV). For this purpose, RFID tags (radio frequency identification) are used as low cost wearables. This article proposes RFID Pose, a visual-based real-time 3D human pose estimation system based on deep learning. The prototype is Developed with standard RFID devices. CV has been demonstrated using Kinect 2.0 as a benchmark.	● Minimizes the workload on infrastructures. ● Ability To Deliver High Quality Results . ● Simplicity and Explainability.	● Narrowly specialized knowledge ● Approach is a bit time-consuming ● Cannot reduce the variance of predictions;therefore cannot reduce generalization error.
9	Nasser Alalwan , Waleed Mugahed Al-Rahmi , Osama Alfarraj , Ahmed Alzahrani , Noraffandy Yahaya	Distributed camera network for human pose estimation can solve the problem of limited view and occlusion of single view, which has great potential for wide area surveillance applications. Kinect V2 IWCF IMM algorithm is combined with the distributed information fusion of human skeleton joints. The final human action	● Reduces the size of the problem. ● Cab handles the non-linear complex behavior. ● No serious distortion of the prediction result.	● Calculations become complex if values are uncertain and/or outcomes are linked. ● Increases computation time, reduces interpretability. ● Higher correlation in prediction errors

		recognition experimental results show that the proposed method can improve the action recognition rate on the datasets captured by Kinect V2.		

IV CONCLUSION AND FUTURE WORK:

The paper explains that the prediction of the students performance, the social activity and their background plays an important role in finding the students under risk. Finding this risk rate is useful for the teachers as well as the teachers . Better performance can be achieved by the student. In their academic performance. So this helps the teachers to prepare early for pedagogical intervention to teach their students.

In the latter works, to find correlation and effect of the attributes in clusters by using unsupervised education data mining techniques. In addition to that, to furnish more accurate prediction models for predicting early at-risk students' performance.we will discover the correlation and impact using attributes analysis and feature selection

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