

Analysis and Research on Indian Education System

(A.R.I.E.S)

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Abstract:

The necessity to constantly improve various processes of college life also includes increased participation in decision-making in the academic environment. The quality of decision-making at the university is premised on the participation of all sectors that make up the university. It is not possible to continuously make inquiries sometimes due to certain problems such as time and logistics. To solve this problem a survey can be conducted with teachers, students and other members who are directly or indirectly connected with education system from private and public institutions, aiming at overall development, that is, identifying relevant problems in current education systems along with their solutions and improving learning mechanism's.

Data analysis and data mining are a subset of business intelligence (BI), which also incorporates data warehousing, data base management systems, and Online Analytical Processing (OLAP). The fundamental algorithms in data mining and analysis form the basis for the emerging field of data science, which includes automated methods to analyze patterns and models for all kinds of data, with applications ranging from scientific discovery to business intelligence and analytics. EDM techniques investigate the data in the pursuit of answers to educational questions and unknown patterns. The necessity to constantly improve various processes of college life also includes increased participation in decision-making in the academic environment. The quality of decision-making at the university is premised on the participation of all sectors that make up the university. Data analysis is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, while being used in different business, science, and social science domains. Data mining is a particular data analysis technique that focuses on modeling and knowledge discovery for predictive rather than purely descriptive purposes, while business intelligence covers data analysis that relies heavily on aggregation, focusing mainly on business information. Data mining is the process of discovering patterns in large data sets involving methods at the intersection of machine learning, statistics, and database systems.

1) INTRODUCTION

Educational Data Mining (EDM) relates to the inter-disciplinary research that deals with the development of various methods and techniques to explore the data generated from different educational sources. EDM techniques investigate the data in the pursuit of answers to educational questions and unknown patterns. The necessity to constantly improve various processes of college life also includes increased participation in decision-making in the academic environment. The quality of decision-making at the university is premised on the participation of all sectors that make up the university. It is not possible to continuously make inquiries sometimes due to certain problems such as time and logistics. To solve this problem a survey can be conducted with teachers, students and other members who are directly or indirectly connected with education system from private and public institutions, aiming at overall development, that is, identifying relevant problems in current education systems along with their solutions and improving learning mechanism's. Data analysis and data mining are a subset of business intelligence (BI), which also incorporates data warehousing, data base management systems, and Online Analytical Processing (OLAP). The fundamental algorithms in data mining and analysis form the basis for the emerging field of data science, which includes automated methods to analyze patterns and models for all kinds of data, with applications ranging from scientific discovery to business intelligence and analytics.

2) LITERATURE REVIEW

a) Existing System

i) Improving University Decision Making Through E-Participation

To test the starting hypothesis, an experimental prototype of a university platform is used in this work: MyUniversity; which was created for a project of the European Union with participation from thirteen universities

ii) A Survey on Problems related to the Teaching of Programming in Brazilian Educational Institutions

Almost all college and university courses have integrated disciplines for the teaching of programming in their curricula. The importance of knowing “how to program” has contributed towards increasing private and public initiatives for the teaching of programming in different countries.

b) Disadvantages of Existing Systems

- (1) Respondents may not feel comfortable providing answers that present themselves in an unfavorable manner.
- (2) Respondents may not be fully aware of their reasons for any given answer because of lack of memory on the subject, or even boredom.
- (3) Surveys with closed-ended questions may have a lower validity rate than other question types.
- (4) The above system is not made available for Indian educational system and hence lacks transparency.

3) PROPOSED WORK

a) Problem Definition

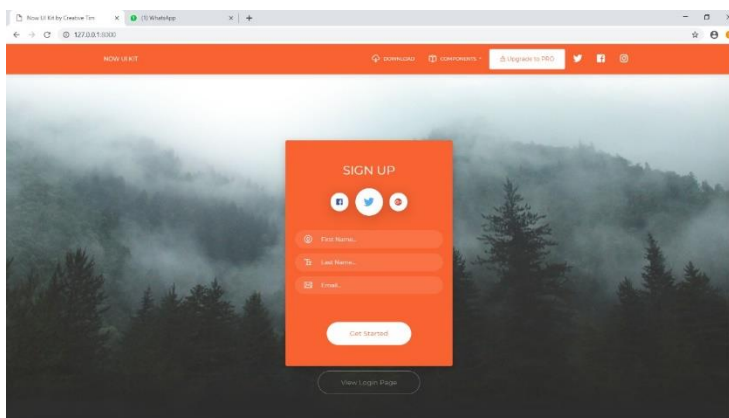
Currently, the online survey system establishes the questionnaire and distributes it to the largest number of participants. However, result of the questionnaire lacks the support provided by the analyzing functionality. Analyzing functionality refers to the statistical analysis tools, which are a collection of methods that used to process large amounts of data and reports. Additionally, the overall trends and the performance of each question are analyzed using the equations from statistical analysis. Using the statistical analysis tools, researchers will be able to get the results of the research.

b) Proposed System

ARIES emphasizes on the terms data mining and data analysis. For these to incur we will be focusing on development of a survey system, this will include a survey bot consisting of an interactive UI that will indulge the audience to interact with the bot by answering the questions raised by the bot which will be distinctive for particular audience. Next asset that will be focus is Karma; here Karma refers to total number of active participations of an individual, number of questions posted and depending upon the number of questions answered one’s Karma will be decided (here Karma is referred to the points one has scored regarding questions answered, shares, likes/dislikes etc.). Next will be an integrated forum where a user will initiate a specific topic or thread and the remaining users might start discussions. these three modules are responsible for collecting end user’s info (Public: Unique Id, Karma, City, Avatar/ Private: name, email, Facebook id, etc.). finally, on the basis of the above stated modules data mining will be performed, where depending upon stacks of info patterns will be created and further analysis of these patterns will be conducted.

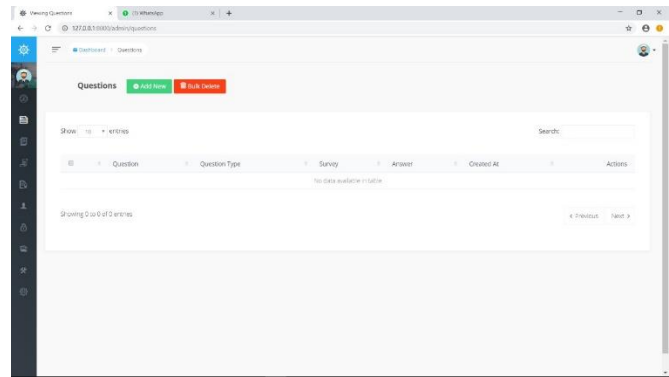
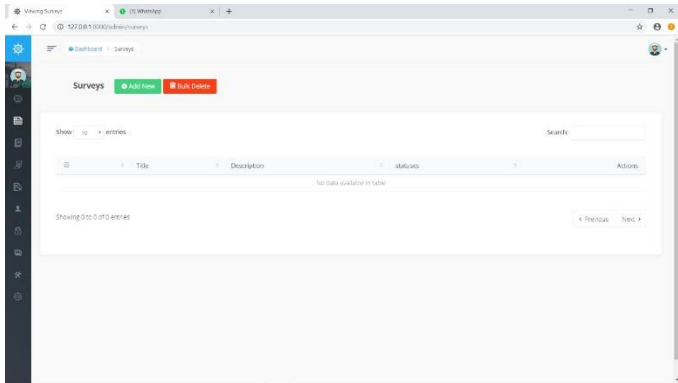
4) IMPLEMENTATION

1) OAuth login:



OAuth is an open standard for access delegation, commonly used as a way for Internet users to grant websites or applications access to their information on other websites but without giving them the passwords.

2) Survey:



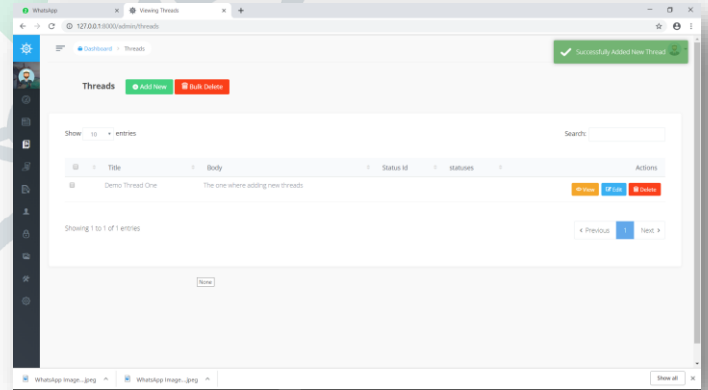
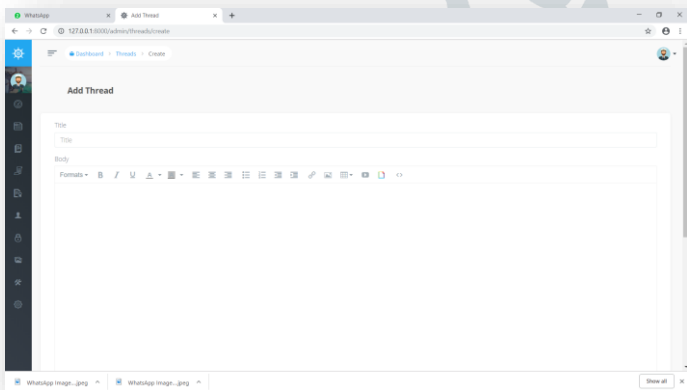
Features: Creation of survey, Adding Questions, Publishing of Survey, Storing Answers Given by Users, Storing Karma

3) Share:

Features: Creating A Sharable Link, Managing the Shared Count, Storing Karma

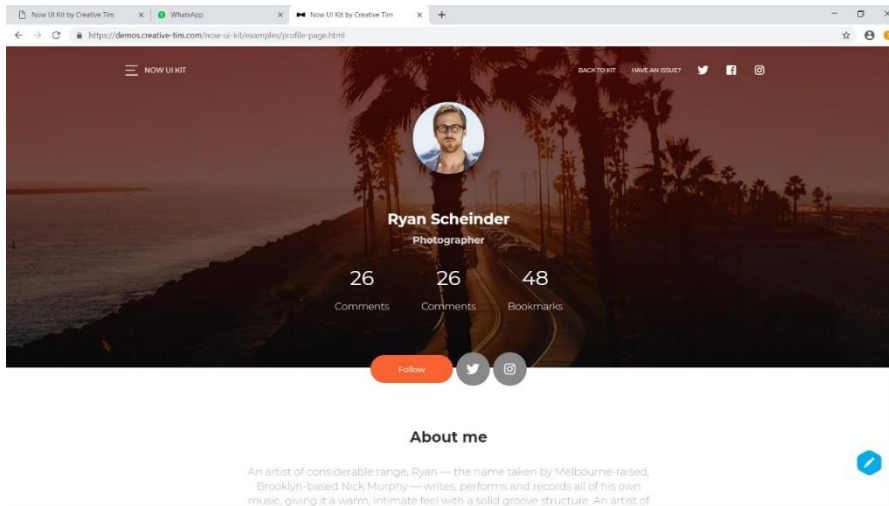


4) Forum:

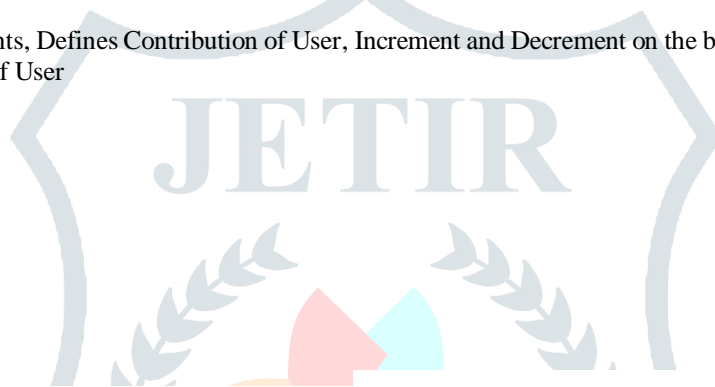


Features: Thread Creation, Comments and Likes, Blocking Threads and Comments, Storing Karma

5) Karma:



Features: Reward Points, Defines Contribution of User, Increment and Decrement on the basis of Activeness, Contribution Defines Uniqueness of User



6) Admin Backend:

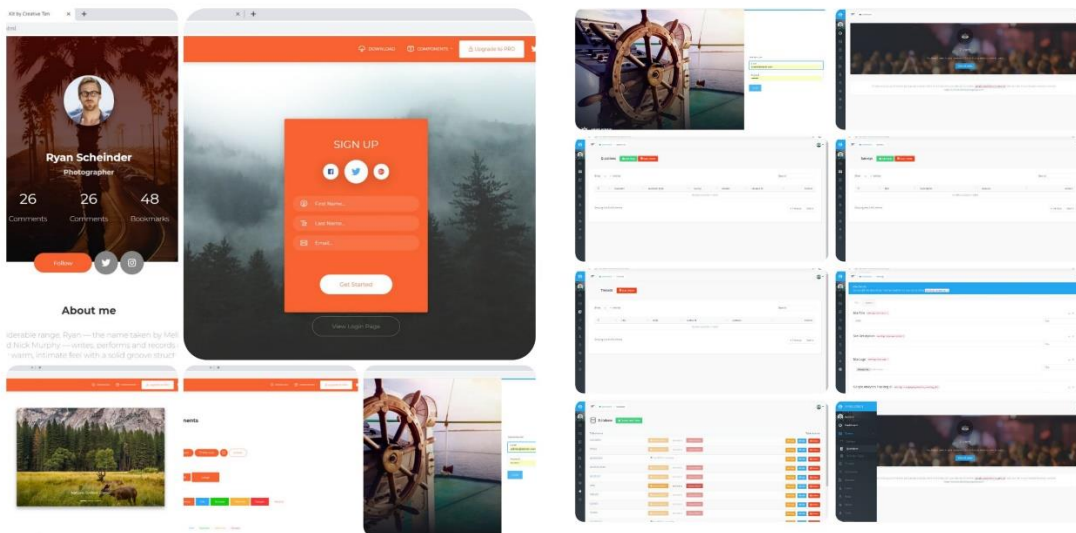


Fig: Front end UI kit

Fig: Admin Panel

Features: Administration Panel, Managing Users, Managing Forums, Managing Comments, Managing Surveys, Questions, Managing Database, Settings.

5) CONCLUSION

To conclude, ARIES emphasizes on the terms data mining and data analysis. For these to incur we will be focusing on development of a survey system, this will include a survey bot consisting of an interactive UI that will indulge the audience to interact with the bot by answering the questions raised by the bot which will be distinctive for particular audience.

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6) REFERENCES

1. **IEEE** "A survey on problems related to the teaching of programming in Brazilian educational institutions", Available in <https://ieeexplore.ieee.org/document/8190495/> on 14 December 2017
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