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Course Analyzer

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***Abstract*—**The MOOC sites have experienced a major upturn in recent times due to the development of online space and the shifting between traditional to virtual way of learning. These sites made it easy for people almost everywhere to take online academic courses offered by top education societies via open access to the web and with unlimited use. Thus, it came naturally to us to ask the question: what makes them so successful? Electronic devices, software, learning platforms and the internet have made learning easier and faster and also their quality seems to be improved by these new technologies. A recent development in higher education and distance learning is the Massive Open Online Course (MOOC) that offers free access and interactive participation to users all around the globe through internet and other technologies. The purpose of MOOC platforms is to reinvent teaching and learning and to create a brand new virtual space for educational interaction. Also, this approach of online learning is a great opportunity to both parties: consumers and providers. It's becoming tough for a learner to choose the best course for his needs due to the vast nature of these platform which will have courses from many platforms at one place and the user will be able to decide their choice according to various filters like skill level, medium (video or blog) and type (free or paid).

I. INTRODUCTION

Online learning has revolutionized the world of educational community in the recent past as being more cost effective and convenient for learners in comparison to the traditional educational system. Online learning has become a boon for more and more learners to get associated with it and continue their education. Earlier studies have defined online learning as an environment where at least some part of the student curriculum is offered via online course delivery mode, or as a transfer of information via the internet. In short, online learning has opened the doors for users where they don't need to be bound to four walls of a room in order to provide face-to face instructions.

The rapid emergence of technology and its widespread use has influenced many aspects of our lives, especially related to studying and education. Electronic devices, software, learning platforms and the internet have made learning easier and faster and also their quality seems to be improved by these new technologies. Online programs and classes have become a major part of higher education across institutions of every size and description. Recently the number of online educational sites have grown in huge numbers and so has their content . While each one of them claims to provide the best content it is difficult or rather tedious for someone to compare the courses of a specific topic offered by each one of them and choose the best for themselves. Course Analyser does all the tedious job and brings all the significant details about online courses / tutorials offered by various educational sites at a single platform and all one has to do is change the most suitable one for himself / herself and enjoy learning.

MOOC platforms have seen rapid improvement in recent times due to the increase in online space and the shifting between traditional to virtual activities. These platforms made it possible for people almost everywhere to take online academic courses offered by top educational societies via open access to the web and with unlimited participation.

There are many things to look at. First of all, every user has their own way of learning. For eg. Some are comfortable by learning through video or some by reading . But it's very difficult to find a course according to their mode. So in our project we are using multiple filters one of which is of type which has two options , video and blog which will help the user to choose according to their choice. Another thing is the review option. Users can give their feedback which will be displayed under the course everytime any user clicks on the course which will be very beneficial for everyone . The main feature of our project is how it has all the courses from many platforms at one place like Udemy, Medium, Coursera , YouTube to name a few. These will ensure that the users choose from the best course possible for their learning needs.

II. LITERATURE SURVEY

In paper[1] A Comparative Analysis of MOOC Platforms (February 2016) , its analysis consists of three sets of criteria: business model, course design and popularity among online users. Starting from this perspective, it builds a range of representative factors for which they highlight the major aspects for each platform in its comparative research. This analysis helped us to understand which platforms and courses are more popular among users which we can use by prioritizing those platforms more in our filters.

In paper[2] Towards an Outcome-based Discovery and Filtering of MOOCs (2019), this article presents maps of MOOCs from different platforms with learning outcomes, allowing learners to discover the most suitable MOOCs for their profile and learning objectives. This paper helped us in how to make sure the user is able to find the suitable courses according to their needs.

In paper[3] Courses beyond borders: A case study of MOOC platform Coursera (November 2017), the study is the first of its kind to assess an online learning environment with respect to participation of institutions to offer various courses and involvement of instructors from all over the globe to make such a coursehouse a success. This paper has used Coursera as an example to explain the involvement of authors and institutions which gives the idea of a new filter.

In paper[4] MOOC Providers and their Strategies (May 2014), Massive Open Online Courses (MOOC) have gained a lot of popularity and are likely to cause interruptions in the current way of knowledge dissemination in the Higher Education System. In this paper, we provide a study of the three largest MOOC sites– Coursera, EdX and Udacity.

III. PROPOSED APPLICATION FRAMEWORK

The Landing page consists of the main title and all the domains of tutorials (e.g Android, Web Development, etc). Also, there is a side panel login and signup screen.

On the home page, we will have various domains to choose from. After selecting a specific domain, the user will land on the courses page, where all the courses related to the domain will be listed. There will be filters(medium, cost, and skill), users can filter the courses according to their choice.

Once the user selects the course, information about that course will be shown like the instructor's name, platform, etc. The user can upvote the course, comment about that course, and add the course to their favorites. Also, there will be a button that will redirect the user to the actual tutorial page.

There's a profile section where any registered user can add course domains, courses and see their favorite and submitted courses.

Project is divided into the following modules:
i Module I: Login
ii Module II: Landing
iii Module III: Domain Courses
iv Module IV: Tutorial
v Module V: Profile

1) Module 1 :Login

- Login Screen
- Signup Screen

2) Module 2 : Landing

- Onboarding screen
- Available domains
- Search domains

3) Module 3: Domain Courses

- Courses
- Use Filters (i.e Medium, Type, Skill level)
- Add to favorites

4) Module 4: Tutorial

- Details
- Upvote
- Review
- Add to favorites
- Link to original video

5) Module 5: Profile

- Submit Courses
- View favorite courses
- View submitted courses

IV. METHODOLOGY

MERN stands for MongoDB, Express, React, Node, after the four key technologies that make up the stack.

- MongoDB - document database
- Express(.js) - Node.js web framework
- React(.js) - a client-side JavaScript framework
- Node(.js) - the premier JavaScript web server

The main advantage of using the MERN stack is that every line of code is written in JavaScript, which can be used everywhere, both for client-side code and server-side code. With one language across all the layers, there is no need for context switching.

The MERN stack is becoming more and more popular and is a powerful stack to work in. A stack is the combination of technologies which are used to create a web application. The MERN stack is a JavaScript stack that is designed to make the development process simpler. MERN contains four open-source components: MongoDB, Express, React, and Node.js. These components provide an end-to-end framework for developers to work in.

Basic Application Flowchart:

The first page which the user sees will be the Home page, which includes all the Domains, login/signup screen where existing users can login if the user is not registered he/she can sign-up, and profile page which can only be accessed after signing in .On the home-page we will have various domains to choose. After selecting a specific domain, the user will land on the courses page, where all the courses related to the domain will be listed. There will be filters(medium, cost and skill), users can filter the courses according to their choice. Users can also compare upto 4 courses, because of this feature he/she can get a fair idea about the available courses and check accordingly. Once the user selects the course, information about that course will be shown like instructor's name, platform, etc. The user can upvote the course, comment about that course and add the course to their favorites. Also, there will be a button which will redirect the user to that tutorial's page. In the profile section user can view courses which are added to favourites, submitted videos and blogs. Also user can add tutorial on their own which will be available to everyone.

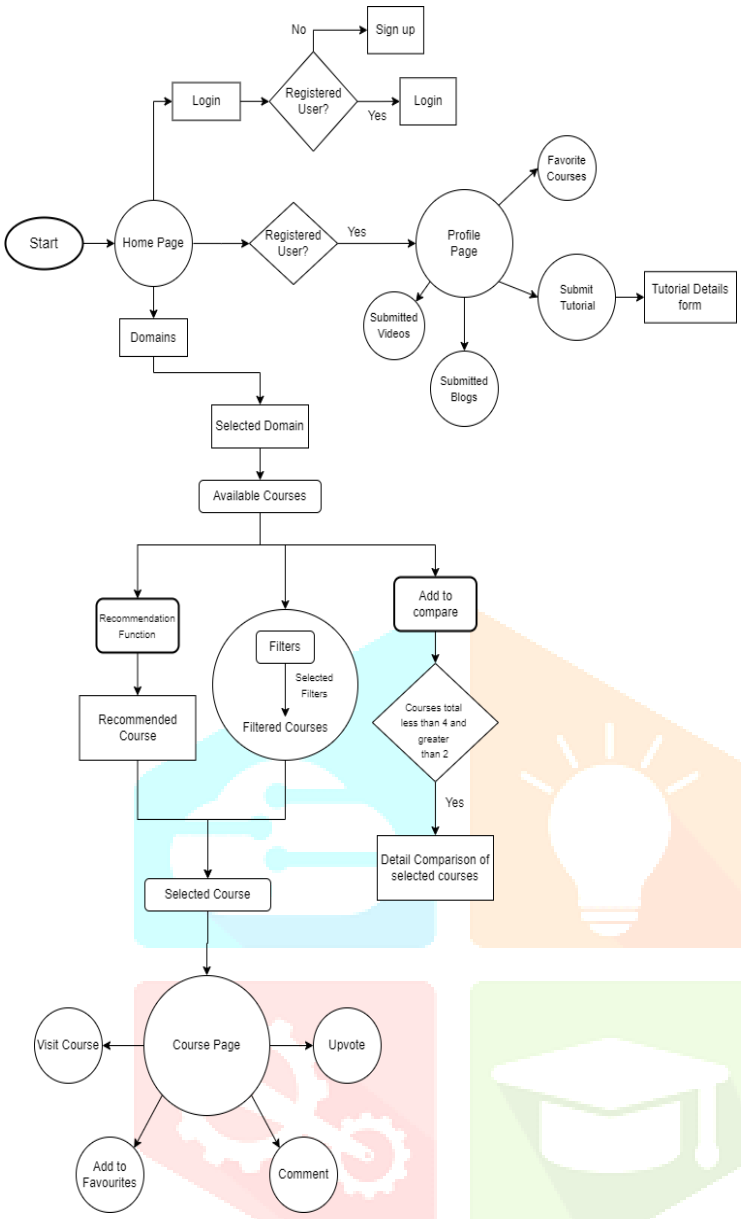

Fig 4.2 flowchart

V. CONCLUSION

Course Analyzer does all the tedious job and brings all the significant details about online courses / tutorials offered by various educational sites at a single platform and all one has to do is choose the most suitable one for himself / herself and enjoy learning. Some users are comfortable by learning through video or some by reading. But it's very hard to find courses according to their mode. So, in our project using multiple filters the user can choose according to their choice. Another thing is the review option. Users can give their feedback which will be displayed under the course every time any user clicks on the course which will be very beneficial for everyone. The main feature of our project is how it has all the courses from many platforms at one place like Udemy, Medium, Coursera, YouTube to name a few. These will ensure that the users choose from the best course possible for their learning needs.

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