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Alumni-Student Mentorship Platform: Enhancing Connectivity in Technical Education

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Introduction

The technological advancements have impacted the means and mechanism of imparting education to the students, specially who are pursuing higher educational degree programs. Due to availability of various options to get connected with one another, the students, teachers and alumni have gained significantly in terms of reaching out and getting connected 24x7. However, there are considerations and restrictions of remaining connected with one another.

This paper discusses the issues of alumni-student mentorship platform in terms of enhancing connectivity by interlinking with the design issues of the software based proirgams in enhancing the connectivity between the mentor and the student. The domain of the paper is confined to the students pursuing technical education programs in higher education

Literature Survey

The importance of mentoring programs of alumni and students has been studied by several researchers and academicians (Dollinger, M., Arkoudis, S., & Marangell, S. (2019) in terms of designing a common platform to studying the impact of the alumni student mentorship sessions (Dollinger, M., Arkoudis, S., & Marangell, S. (2019). However, mentorship programs in the context of student -alumni relationship plays a crucial role in terms of guidance and preparing the students for future career development, but bit the absence of enhancing the degree of contact and connectivity in technical educations is missing altogether **(**Skrzypek, C., Diebold, J., Kim, W., & Krause, D. (2019).

This calls for the development of a software-based platform which can address the needs of the alumni as well as the needs of the students who are pursuing technical education (Gupta, A., Nanda, A., Sawhney, S., & Gupta, A. (2025). The software-based approach benefits the alumni and the student in numerous ways (MacArthur, C. A., Pilato, V., Kercher, M., Peterson, D., Malouf, D., & Jamison, P. (1995). Apart from implementation of the implementation of the various policies related to mentorship programs (Baran, E. (2016). For example, the students as well as the mentors can assess the quality of the mentorship programs (Lechuga, V. M. (2011). Other examples, include the technical aspects of the software-based mentorship programs (Trainer, E. H., Kalyanasundaram, A., & Herbsleb, J. D. (2017, May) and this may include the navigation, the design and the metrics based software's that enables the mentor and the mentee to assess one another in an objective manner(O'Neill*, D. K., Weiler, M., & Sha, L. (2005).

Thus, the designing of the software is an essential component of the mentor student program.

Designing the software

In a nutshell, every software whether it is web based or an app-based software comprises of three parts. These are front End design of the software, the middle layer of the software and the back-end layer of the software.

While the front-end layer deals with the UI component, the backend and the middle layer deals with the database and the basic technological architecture of the mentor student software for enhancing the connectivity. The Data base layer is the actual layer where the software stores the data.

Frontend

The front layer is the most important layer as it presents the face of the software to the user. Being the front-end portion of the software, it is very important that careful construction of the software is carried out other wise it loses the connectivity aspect of the mentor and the student. For example, if the user interface contains very bright colors or the controls in the software are unfriendly then this generates a revolting nature and the user may not be able to understand the value of the web page being shown to the user. In other words, the user loose the interest in using the software. The user interface is

generally developed in HTML and CSS based software's. The main purpose is thus to ensure the connectivity is maintained by generation, collection and analysis of the metrics.

The middle and the backend layer for enhancing the connectivity of the mentor program.

The middle and the backend layer comprise of the logic layer well as the storage of the data that is the logic is developed by means of React software's. This software is responsible for executing the various algorithms and storing generated by these algorithms. Generally, we, use MongoDB and Express.js to develop these components.

The most crucial part of these is the interpretation of the data. For it is this data which determines and enhances the connectivity of the alumni student mentorship programs. We generally use Tableau and Power BI software.

The parameter which are evaluated for enhancing the connectivity include

- Communication & Engagement
- This may include aspects such as discussion forum in the software wherein several students and alumni can login and start the discussion thread. This will ensure the generation of new ideas amongst the participants and thus, enhance the connectivity with the alumni as well as students who are working in foreign cities.
- The deployment of chatbot in the software will improve the real time aspect of the problem-solving approach
- The integration of various social media tools such as snapchat, insta, face book and others will ensure better connectivity as it removes the constraint of the interacting with a common platform only

Conclusion

In today's rapid changing world, the importance of enhancing the connectivity of the alumni mentor with the students plays a crucial role whose importance cannot be assessed in a single instance. This calls for enhancing the connectivity in terms of the reach and in understanding the crucial connect. This entails the design of the software which exclusively must integrate with several new technical devices as well as the technical stream.

This must take into consideration the following aspects

i. Immersive UI / UX component in enabling the alumni and the student connect with other

ii. Integration with AI components. This is very crucial as it the AI which is ruling the world. It has already invaded into various aspects and all these aspects are responsible for enhancing the connectivity

iii. Discussion forums enable the students and the alumni to ensure that students are ablr to enhance the creativity, the knowledge and the skills required to maintain connectivity and excel in the world

This paper has tried to cover the design from purely technical perspective of the software,

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