

Modern Connect: An Exclusive Platform for Students and Alumni of MCOE, Pune to Connect

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Abstract— Pursuing higher education, especially in Computer Science and Information technology, where there is a continuous need for learning as every day there is something new, Web development itself is a good example. As students of engineering, we have noticed this, sometimes it is hard to keep up with the pace. Students often want to learn something new that would be beneficial for their career growth, sometimes learning new things could be difficult, so we thought of an idea that would help students from our institution by collaborating and connecting based on common domain interests. To address the problems of existing students we came up with a solution by introducing new features and functionality where alumni will help an institute to grow with their skill sets and where students can have a platform where they can learn, share skills and collaborate and build projects, our platform is called “**ModernConnect**”, named after the institution. Alumni network is fairly an old concept that is implemented in various colleges, but the relationship in this is just between Alumni of the institution. Alumni possess a connection with the institution, they can relate with students of the institution as they were in the same place in the past learning new things and gaining new experiences. Alumni of the institution have the potential to be great mentors for students for domain knowledge. Not only that but on our platform Alumni can also have post-career opportunities that can benefit both alumni as well as students. Learning and growing in a fairly safe and monitored environment is also important, hence this platform is only exclusive to our institution.

Keywords— Alumni network, ModernConnect, Cooperative Learning, Peer-to-Peer Learning, Student-Alumni Network.

I. INTRODUCTION

In this modern world, there are many new things that one can learn. Students learn a lot of new things and having a mentor who can guide them can be helpful to new learners. A mentor is “a trusted counselor or guide” [1], A mentor is typically someone who has some expertise in a particular field [2]. A mentor can be anyone e.g. teacher, alumni, and even a student. Mentorship has shown a positive impact on students enrolled in higher education courses such as engineering[2]. Students can even guide each other by acting as mentors (which is one of our main objectives) which would result in students learning cooperatively. Cooperative learning means learning and collaborating to fulfill common goals or interests. Many types of research since the 1980s have shown that cooperative learning has a positive effect on the majority of students who partake in it [3]. One can not partake in cooperative learning without being adaptable and dynamic. For students of engineering, it can be potentially beneficial as it not only aims at learning new skills but also collaborating with others and building projects which helps not only with learning the skill but also helps in career growth.

Here is a good example for better understanding: Let us consider a student named Om of Information Technology who is a Freshman in an institution, now as a freshman, Om is getting hold of the things which are going on in their institution, Om takes his time and fits

in the environment. He right now doesn't have any idea or knowledge about what programming is (in this case) or what exactly is going on or has demand in the tech industry. Well, some time passes now our freshman has learned some basic programming and has also completed his 1 out of 4 years of engineering, Great!. Now, he is a sophomore, this is a great time for receiving guidance from someone skilled in a domain. Now, he continues to learn a new skill, let's take Game Development as an example here; He searches for good game development courses on the internet and enrolls in what he thinks is good for him. The initial stage of the course seems quite easy but then after some time, it gets harder and harder. This is the reason why many famous platforms like Udemy and Coursera have forums. Most of the students in his class have not learned any industrial skills except Java (no hate for Java). This is a fairly common problem in India among most engineering institutions. Here we are not saying that there isn't anyone who can't grow or learn by themselves, here what we are saying is how hard self-study of skills can be. Now only if there existed a platform where someone (student or alumni) from their institution itself who is knowing the game development field or maybe even someone who is a Game Developer could have guided the student in what to do or not do to our sophomore it or maybe even peers who had the willingness to learn Game development would have helped to at very minimum not lose any confidence and

motivation. By taking guidance from others you would be rather from personal experience that the person would have tackled while learning. Cooperative learning in an institution is also quite safe as everyone would be in the same environment facing most likely the same problems in learning.

So we thought why not create a web-based platform among the students and alumni of our institution i.e Modern College of Engineering, Pune (hence the name Modern Connect) to form connections with each other to collaborate on projects in their domain and to learn domain-specific skills from each other. Once you have registered to the platform you can connect and search for students and alumni who are registered on the platform. This platform is of course also meant for alumni to connect with other alumni. Both alumni and students can search and connect. Alumni can also post career opportunities that could benefit both the users of the platform.

II. SURVEY

We conducted a field survey regarding this topic amongst the students of Information Technology in MCOE. In this survey 3 questions were asked to the students of MCOE, The three questions being:

- Q1. "Would you like to connect with alumni and your peers having similar interests to help each other while learning something?"
- Q2. "Do you feel like there is a need for a skills/achievements sharing platform exclusive to our college?"
- Q3. "Do you think showcasing your achievements, skill, and learning and Possible Guidance and access to the exclusive opportunities from Alumni will help Students of our college excel?"

For the first question, about 89.2% of the survey said "Definitely Yes", 10.8% said they were "Unsure" while none of them said "No".

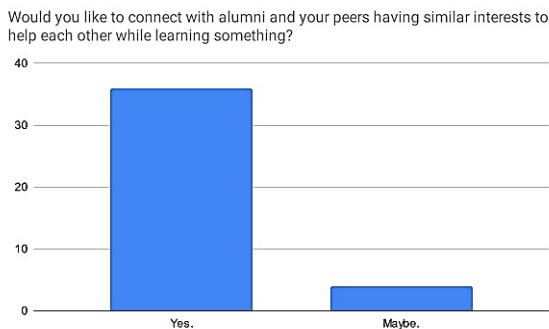


Figure I (a): Online Survey via Google Form: Student's opinion on Alumni Network

For the second question, about 83.8% of the survey said "Definitely Yes", 13.5% said they were "Unsure" while 2.7% of them said "No".

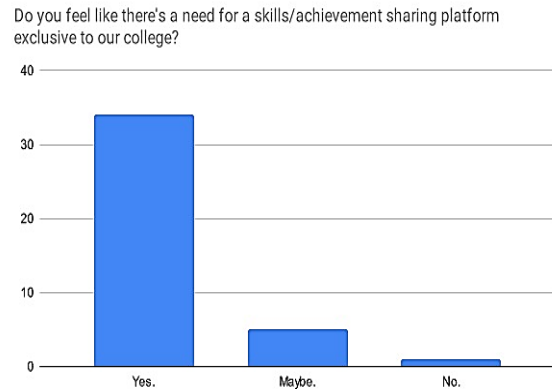


Figure I (b): Online Survey via Google Form: Student's opinion on Alumni Network

For the third question, about 78.4% of the survey said "Definitely Yes", 18.9% said they were "Unsure" while 2.7% of them said "No".

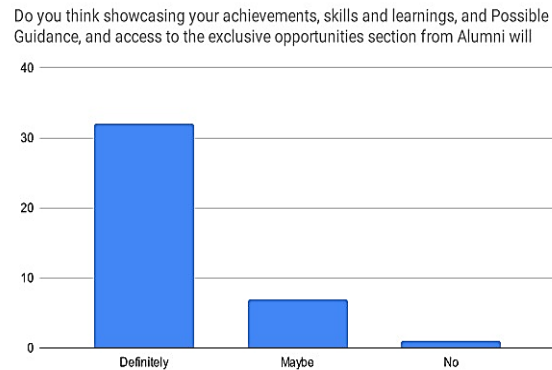


Figure I (c): Online Survey via Google Form: Student's opinion on Alumni Network

III. OBJECTIVES

The main objectives of this study areas:

- Providing a platform where students can connect with the alumni and other students in the institute.
- Providing a platform where individuals can show their skills, knowledge, and developed projects.
- Providing a platform where alumni can post career opportunities so students and other alumni can benefit from this.
- Providing a platform where students can get help from other alumni and students who are experts in that particular domain.

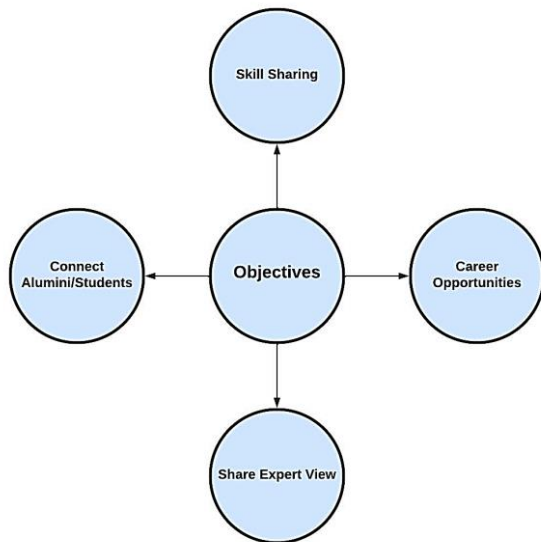


Figure II: “ModernConnect” objectives

IV. DELIVERABLES

The product deliverables of our study are as follows:

- A system that can connect students to alumni and alumni with alumni.
- A system that can display the skills and achievements of the student and alumnus.
- A system that allows alumni to share job opportunities exclusive only to the platform.
- A web application that can support students in their overall development.
- A system that can provide the best way to get help from experts in the same domain.

V. SIMILAR WORK

While searching for similar works that had been done, we came across an interesting topic on IEEE, it was the concept of creating an institution-exclusive online-based learning platform on the famous platform Discord. Discord as a platform is quite good, discord is mostly used by video game players to enhance their communication. It is also used by many people to join a community e.g. Programming community of a tech Youtuber where you can ask questions and even get referrals for a job. Due to the recent outbreak of COVID-19, there has been a great rise in online learning. The authors of the topic have taken their college community online on Discord, from conducting lectures to hosting Programming competitions and even hosting a graduation ceremony all on Discord [4]. Since the outbreak of COVID Discord too has grown a lot of popularity as there has been an increase in e-learning, the communities of this e-learning platform have started their Discord servers. Discord lets you create your community or what they also refer to as servers. To let

others, join or to join these servers you have a unique invite link that is assigned to each server. There can be up to 250000 users on a single discord server but only 10000 users can be online at a time. And just in case you want more than 250000 members to join your server you can try contacting Discord and then they would review your community to decide whether to increase the mentioned server cap [5]. Discord also has lots of bots who can be added as a user to the server [4] and this is a really good reason why there are so many Discord communities as well.

There are other social media platforms like Reddit and Twitter guiding students as well. Almost every week if not every day there is at least one post of people offering mentorship to students. Even if most of them are legit and safe, it remains a fact that these platforms are based on the internet and we do not know who these people are in real life.

We also have checked some alumni communities of other Engineering colleges in Pune itself and there is are alumni portals of lots of colleges but they remained inaccessible to us as we are not students nor alumni of those institutions.

VI. APPARATUS

A. Front end

The front end of this platform is developed using ReactJS. ReactJS is a flexible, efficient, and scalable open-source library of Javascript for the front end which is developed by Facebook. ReactJS allows isolating the components from each other for better management. ReactJS will help to create a dynamic and scalable web application that changes data frequently without reloading the web page. In this project, we are using “Functional Components” along with the Context API for state management. We are using Axios which is a popular library for sending asynchronous HTTP requests to the REST endpoints.

B. Back end

The backend of this platform is developed using the popular open-source python library Django. Django is a REST framework that provides a toolkit for backend development. Here we have used Postgresql as a database.

Postgresql is an open-source relational database that allows us to store a large amount of data sophisticatedly and securely. The back end is the crucial part of the application for that our REST API is deployed on the Heroku platform. Heroku is AWS based service that is highly efficient and scalable.

VII. CONCEPT

As mentioned so far, the basic idea of our project is to create an exclusive platform for our institution i.e P.E.S. Modern College of engineering where students and alumni of our institution can connect with other students and alumni of the institution. Well as it was said earlier, it remains a fact that there are lots of people on the social media platforms like Discord, Reddit, Twitter, etc. are providing “mentorship” or “guidance” to students, and there remains a safety concern. We do not know if a person is who he claims to be. We do not claim that people providing guidance or mentorship are fake or dangerous, as these communities are heavily moderated, not every day does one find someone who has cracked the interview of a huge multi-national company like Google.

These are good platforms, but safety concerns remain a factor. But with our concept, a student can connect with alumni who are experienced in the industry and students who maybe have some knowledge of a domain. Our project however is not only meant for connecting students to alumni and other students but it is also meant to connect alumni with other alumni. Alumni are always an underused resource by institutions [6]. By creating a platform that solves two problems, one being that, to provide a platform for alumni of the college where they can connect not only with each other but also with students and form their network while also getting to know what major events are happening in the institution which they graduated from. And the second being that, to provide an exclusive platform for students of the college to connect with other students and alumni and form their network.

Alumni can be a person who is working in the industry, and there is always a demand for people in the industry [6], Alumni and Alumni relations can be beneficial to both sides. There can be posting of job opportunities on the platform, which in this case an Alumni can benefit, not only from job opportunities posted on the platform, but alumni can also collaborate where the work asks for, referrals among alumni and share personal experiences amongst each other can also be helpful to both the sides. Alumni and student connections can be beneficial to both sides as well, where students can gain mentorship and guidance from alumni and alumni can gain a potential skilled person for their organization. Besides that, there are also various externships/internships and job opportunities provided by various Alumni as well. In many developed countries, there are also internship fairs and placement programs conducted by alumni of the colleges [6] which are again helpful to students. For the students, this can be beneficial. Many institutions

like Georgia Tech State University located in the United States of America provide an online platform for both students and alumni to find career opportunities as well [7].

Currently, internships are in high demand as people gain experience and knowledge which is required in the industry. “An internship is a period of work experience offered by an organization for a limited period of time.” [8]. Internship opportunities help students gain high-quality job offers sooner [9] as they gain experience in their domain. As you work in the industry you would gain more connections as you interact with more knowledgeable people resulting in building a strong network [9]. Internships can also result in gaining what is termed as “PPO” or “Pre-placement offer” which means that, when an organization offers their intern a permanent position in their organization and also a letter of excellence is provided [10] which could boost your resume.

Our platform can also be used for learning and building new projects and collaborating with other students and alumni as well. If a student gets to learn a specific skill that he likes but is having a hard time keeping up with it, the student could just take the help of other peers. Students can collaborate and build projects and even take guidance from alumni who possess knowledge or work in that specific domain. According to various researches cooperative learning amongst students mostly has a positive impact on the students who are involved in it [3]. It is not necessary that everyone partaking in cooperative learning needs to be equally knowledgeable. One can always help another with something they don’t know and vice versa. Alumni and student relations can potentially improve the quality of graduates who are freshers in the industry as they would have had proper guidance, mentoring, and maybe even a few internships before graduating from the institution.

VIII. MODULES

This project is divided into two modules:

A. Academic Student

Academic students are those who are pursuing their academics. For a student acting as a user of this platform, the student would have to first create their account on the platform using unique information which is only available to students and the institution. After creating the account and adding values to the fields on the profile page, the student would be presented with the homepage where they can search, view, and connect with other users (i.e. Students and Alumni) of the platform. Students can post their relevant achievements,

and their relevant skills and they can also post relevant projects that they were a part of or have developed individually. Students can post and review content on the forum present on the platform. Students can view and apply to the job opportunities posted by Alumni on the platform. Students can connect with both the users of this platform.

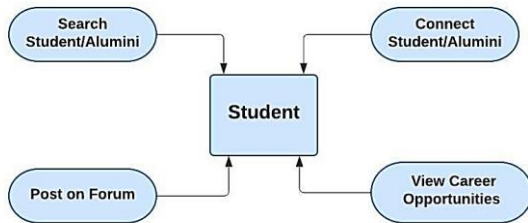


Figure III (a): “Modules of ModernConnect”

B. Alumni

For an Alumni acting as a user of this platform, alumni would have to first create their account using unique information which is only available to students and the institution. After creating the account and adding values to the fields on the profile page, alumni would be presented with the homepage where they can search, view, and connect with other alumni and students who have a registered account on the platform. Alumni can share their relevant skills, relevant projects, current organization, experience in years, relevant domain, and relevant achievements. Alumni can post and review the forum, Alumni can both post and view the job opportunities posted on the platform. Alumni can connect with both the users of this platform.

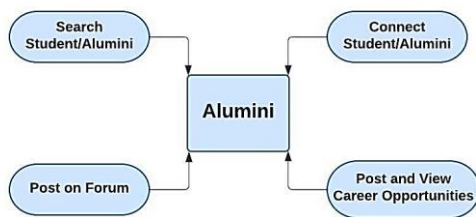


Figure III (b): “Modules of ModernConnect”

IX. FEATURES

There are various features on this platform, which will be listed and explained below:

1. Open to both students and alumni

Mostly in many colleges, there exists an alumni portal but it is only limited to alumni of the institution. They are pretty useful as well, they can provide a platform that could provide job opportunities. And as said earlier Alumni have a special connection to the institution and

have memories that were spent there when they were students as well, because of these alumni portals one can also maintain contacts and know what is going on with their peers. But our platform not only has this feature but also adds a feature that can connect students with other students and alumni to potentially grow in their desired domain. Not only students but Alumni can also connect with students that they want to connect with.

2. Searching and Viewing alumni and students in a specified way

Once you are a registered user of this platform, you can search for other users of the platform. You can search for alumni and students in a specific way, you can search the users by their department, skills, domain, and name. Profiles containing all the relevant fields would be displayed from the given parameter for the search.

3. Connect with users

Both the users of this platform can connect. Connect or connection adds new nodes(users) to your network. One can build a strong network by connecting with others. A user can search using parameters and then the profile would be displayed, there would be a connect option present there by which a user to whom connect is sent would be notified and would decide whether to accept or reject the connect

4. Sharing Skills/ Achievements/ Projects

Both the users of this platform can share their relevant skills, achievements, and projects which they have accomplished. This feature is important for analyzing someone based on their knowledge of a domain. It is useful for both alumni and students of the platform.

5. A Forum open to all the users

This web-based platform would consist of a forum where users can post relevant content, and other users can review it. The forum can be used to solve queries or initiate discussions amongst the users.

6. Career Portal to post job opportunities (Alumni Initiative)

There would be a career portal included in this platform. Where only alumni can post job opportunities, but both students and other alumni can view and apply to that particular job opportunity.

X. FUTURE SCOPE

In the future this platform can be scaled in the following parameters:

1. End to end chatting

This platform could provide end-to-end chatting services between both the users of the platform (alumni and students), This feature can fairly increase user communication even more.

2. Online clubs' activities

There are various clubs in MCOE e.g Rotaract Club, PixInsight Club, etc. There are various other clubs in MCOE as well, but they remain unknown to many students. Clubs can post their activities on this platform, which would result in the clubs being discovered by academic students and alumni.

3. Help Center for Alumni

If Alumni need any help from the institution they can post their queries in the help center which would be reviewed by the helpdesk.

4. Industry Connect

Apart from alumni connections, an industry can partake in posting career/education opportunities.

5. User Activity Ranking

A user's profile can be boosted by their activeness on the platform which of course would be moderated, A user can view/judge other people based on their activeness score on the platform.

XI. RESULT

After deciding the scope and the features of this platform, we conducted a field survey with the alumni of Modern College of Engineering to identify their views and needs concerning this domain. The survey was conducted with 20 alumni who graduated from different branches and academic years. The set of questions asked was as follows:

- Q.1 Would you like to connect with students and your peers having similar interests to help students with guidance?
- Q.2 Do you feel like there's a need for a skills/achievement sharing platform exclusive to our college?
- Q.3 Do you think showcasing your achievements, skills and learnings, Possible Guidance, and access to the exclusive opportunities section from Alumni will help Students of our college excel?

Among the 20 Alumni who participated in the survey, 17 believed strongly that there's a need for connection,

and resulting guidance from alumni to students, while 3 of the participants were unsure about the question.

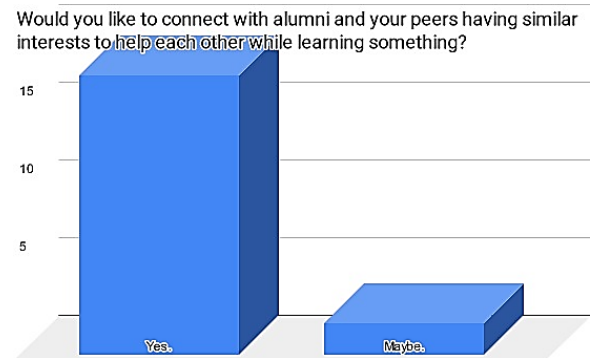


Figure IV (a): Online Survey via Google Form: Alumni's opinion on Alumni Network

Among the total 20 participating alumni, 17 alumni believed strongly that there's a need for an exclusive skills and achievements sharing platform, whereas 3 of the participants were unsure about the question.

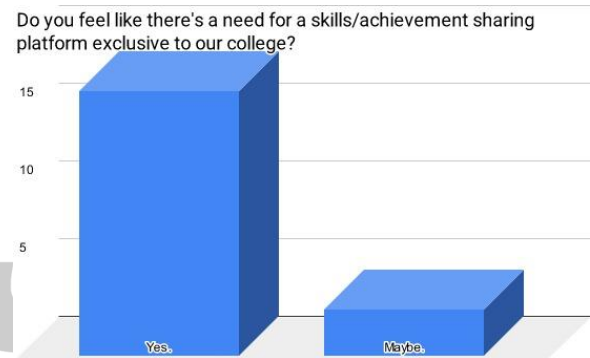


Figure IV (b): Online Survey via Google Form: Alumni's opinion on Alumni Network

Among the 20 participants that took part in the survey, 14 alumni strongly believed that showcasing their skills, achievements and guiding students will help them excel in their particular field, whereas 5 participants were unsure and 1 participant disagreed with the statement.

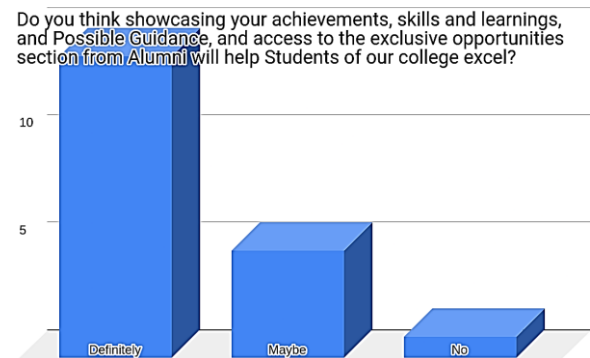


Figure IV (c): Online Survey via Google Form: Alumni's opinion on Alumni Network

XII. CONCLUSION

ModernConnect is an alumni connection platform that will provide features like connection, skills or achievement sharing, opportunities sharing, and provide guidance with the help of interested alumni in a specific field. This web-based platform is developed using popular web technologies namely ReactJS for the front-end and Django as the backend framework, and SQL-based Database.

This project would potentially help students by helping them receive guidance from their peers and alumni of the institution. This platform also analyzes the interests of a student and guides students in the form of Alumni and Other Students. Alumni connections with each other can be helpful to them by providing career opportunities as well as potentially skilled freshers to Alumni. This platform would provide a safe learning platform for academic students as well as alumni to connect as people know that they are communicating with a legit user who is from their institution unlike platforms like Discord, Reddit, Twitter, etc. According to our survey, it was observed that many students of MCOE desired an exclusive platform where they can receive guidance from their peers as well as Alumni and share their skills with their peers. So hereby we conclude that our platform would be certainly beneficial for students of MCOE.

ACKNOWLEDGMENT

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