

A State-level
Azadi Ka Amrit Mahotsav Hackathon 2022

Organization Name: BrainyBeam Technologies Pvt. Ltd

Department/Office Name: Industry

PS Code: [PID705](#)

Problem Statement Title: Mentor- An education support portal for the remote location

Team ID: TM002487

Team Leader Name: Yash Parsana.

Institute Code (AISHE): C-347

Institute Name: Birla Vishvakarma Mahavidyalaya

Team Member Details

Team Leader Name: Yash Parsana	B.tech CSE	SEM V
Team Member 1: Dharmesh Vala	B.tech CSE	SEM V
Team Member 2: Jay Trambadiya	B.tech CSE	SEM V
Team Member 3: Tejas Tank	B.tech CSE	SEM V
Team Member 4: Kavya Dave	B.tech CSE	SEM V
Team Member 5: Honey Rathod	B.tech ECE	SEM V
Team Member 6: Jay Sojitra	B.tech IT	SEM V
Team Mentor: Kirtikumar Sharma Category: Academic	Expertise: Full Stack Development	Domain Experience(in years): 2.5+

Abstract

Looking into the current situation which is very uncertain, for example, considering cases like COVID, situations like these might cost students their prime study time and it might be difficult for the students to bridge the gap later in their lives.

Consequently, it appeared mandatory to develop a portal wherein a student can learn and undertake mentorship from a knowledgeable mentor, get their guidance, get the roadmaps for further studies and many such similar things can be done by students.

Our project will be an online education portal focusing on educational fields, sharing study knowledge, and ideas, between individuals or groups interested in sharing knowledge of events conducted in different institutions. It also includes seamless integration with all the educational resources in order to greater communication from beginner to expert.

Literature Review

A growing number of students are now opting for studying and connecting online for studies, mentoring, collaborating, etc. They find the traditional classroom modality restrictive, inflexible, and impractical. In this age of technological advancement, schools can now provide effective classroom teaching via the Web. Thus, this shift in learning and teaching medium is forcing academic institutions to rethink how they want to deliver their course content. The purpose of creating a web app was that it was a good medium for the students who find it difficult to travel and go to school in remote locations. Even the students from the urban areas too can gain the benefit of the e-mentor app and can access important resources shared by well-known mentors with their years of experience.

Approach to solving the problem

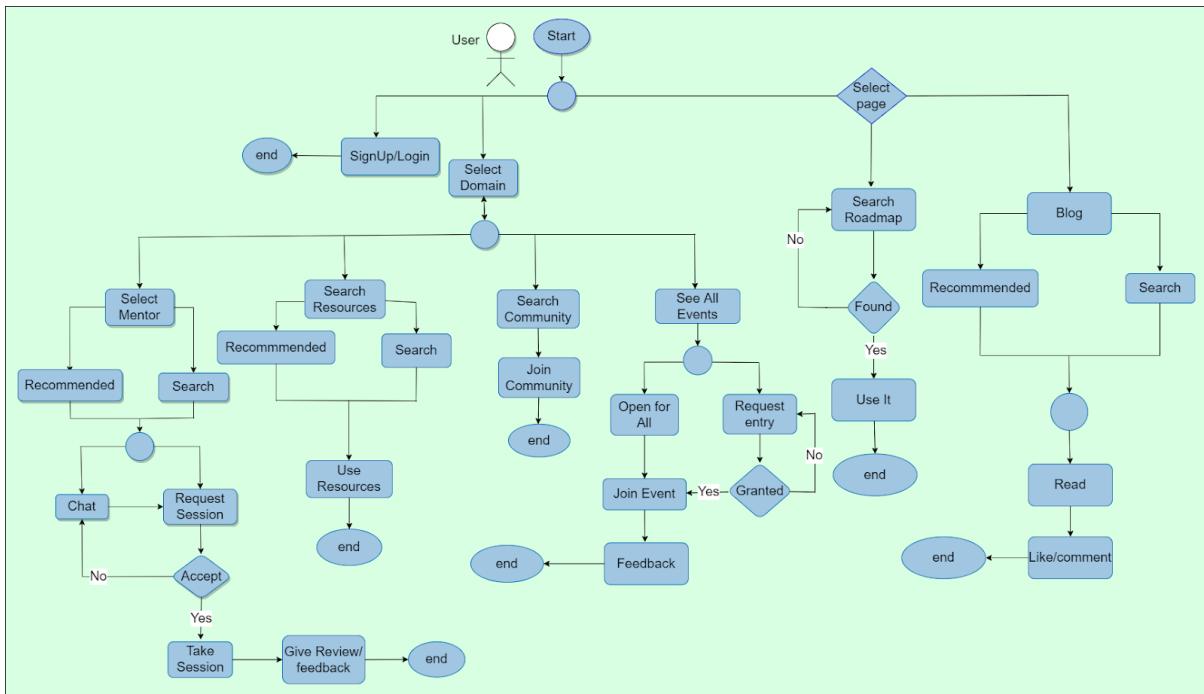
For solving this problem, we will create a **web application** for students and mentors, and our main motive behind creating this app will be to help students in getting the right guidance, and education, and provide them with the right academic support.

Our app will provide a platform for student and mentor interaction wherein the mentors can also share their knowledge by writing blog posts on important subjects or by conducting live master classes with the students. Our web application will have an in-built feature for rating the mentors on the basis of the feedback given by the students so that we can always have only genuine teachers imparting education on our platform. It is going to have many more such features which will make it a trustable and student-friendly application.

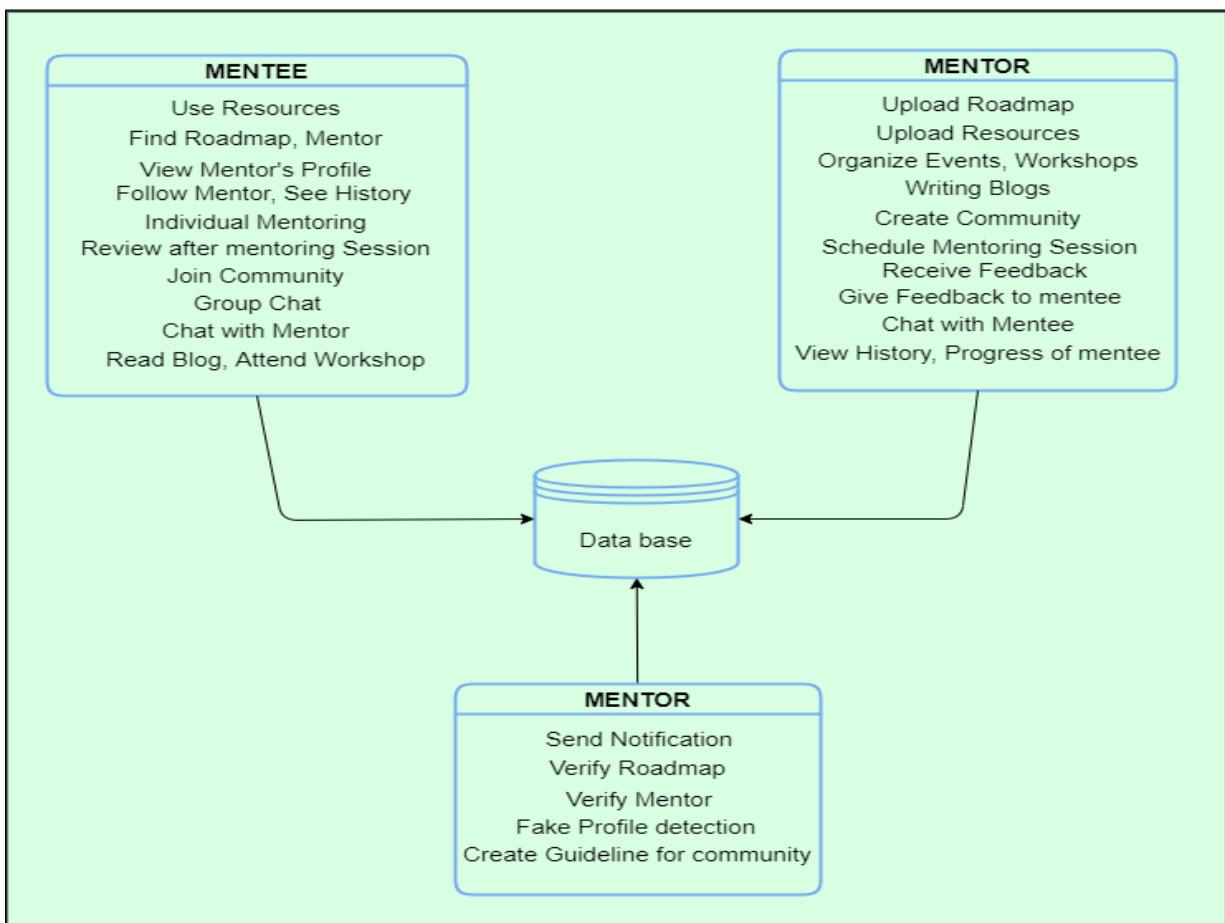
[**PID705 – Mentor Portal for remote location Prototype Design - Video Link**](#)

PROBLEM	SOLUTION
Lack of Interaction	Peer-to-Peer Mentorship
Lack of GUIDANCE	Roadmap
Finding the right Mentor	Recommendations & Filtering option(Mentor Matching Algorithm)
Lack of COLLABORATION	<ul style="list-style-type: none">CommunityGroup ChatEvents/Workshop
Sharing Mentors Experience	Blog or interactive LIVE sessions
Doubt Solving	<ul style="list-style-type: none">Discussion ForumChat with mentorDomain specific Group
Track of Progress	Stored History
Mentor's performance check	Feedback based Rating System
Educational resource Sharing	Resources to be posted on platform

Road Map/ Flow Diagram



Use Case Diagram



Tools and technologies to be used to solve the problem.

For the development of our web application, we are going to use various different tools for frontend, backend, data storage, cloud storage, etc.

The tools and technologies to be used are mentioned below:

- React, JS, HTML, CSS for Frontend
- AWS firebase for Cloud Storage
- Node.js, Express.js for Backend
- MongoDB for Database
- Machine Learning/Artificial Intelligence
- Natural language Processing for Blog Recommendation System
- A Third-Party Meeting Platform for Individual Mentoring
- A pre-trained Text Summarization Model (NLP)
- Visual Studio Code (VS CODE)/Sublime Text Editor – Code Editor
- Figma for Website Prototyping
- Agora API for peer to peer mentoring

Challenges/Risks/Dependencies

The first challenge in implementing the solution is that we have to bring mentors and students on our platform. The second Challenges in our Portal has to keep mentors and mentees connected on the portal for that we introduced a reward system. Our app also provides a feature for Individual mentoring and Peer to Peer mentoring. This specific feature uses a third-party platform for live video meet. It uses Agora API/ Skype API for achieving the same. This is a huge dependency that we aspire to not hinge on for long and provide as an in-built feature. We are currently working on just the web application part, which might not be feasible for everyone to operate on it with any device available. After the successful completion of the web, the android/ios application can also be created.

Outcome

Once our web application will be developed, an individual will be able to SignUp/Login as a Student or a Mentor. Students will have to fill out a form when they log in the first time. Whereas the mentor will have to fill out an application form to portray themselves as a genuine mentor and represent their teaching and guiding skills, and their domain and add in some documents which prove that he/she has joined as authentic mentor. Mentors will be able to post blogs, conduct live mentoring sessions, reach out to potential students via chat section, make a domain-oriented group of students and mentors, and post the important roadmaps which help students choose better options, create communities, etc. Students will be able to provide feedback as well. Thus there will be a rating system for the students as well as mentors in addition to the reward system. Thus, this app will achieve a target set for successful and efficient peer-to-peer learning and much more.

Work Done till date

The research part as to which we can start working on our project is almost concluded. In research, we searched for various problems that a student in a remote location faces or a student in times like COVID faces. We searched for solutions that are already available and tried to find out why it isn't still solving the problem. We noted down all the points which are lacking and we tried including all those points in our own app. Basically, we merged the good and the lacking features in the apps available to make an app that is complete in itself and an app that will solve the problems faced by students in real time.

Apart from research work, we have worked on the User interface(UI) part which is almost finished. The approach to solving the problem is finalized keeping in mind various real-time issues we might face while building the app. Tools and

technologies are finalized with all the alternatives that we might need while developing.

Business Context

Our app will follow a monthly or yearly subscription for some special features that we will provide. Newly joined mentors can provide free mentorship to prove their genuineness for a period of time until he/she does not reach a certain level. Later, the mentor can start charging students for their mentorship. The mentor can also choose to provide free sessions or charged sessions, it totally depends on the mentor. Once mentors start providing paid sessions we will charge some percentage of his/her fees for each paid session. Once the student subscribes, a student will get access to the chat and Individual video call feature with the mentor . Also, the private blogs or resources that the mentor has posted will now be visible to students who have subscribed.

We will also keep a reward system for the students, wherein we will provide free coupons to live classes or provide them with goodies and such similar things. But, students have to reach upto a level to become eligible for the reward.

For more details refer to our prototype design video.

[PTD705 – Mentor Portal for remote location Prototype Design](#)

Image of Solution

Find Mentor Page

The image displays three separate screenshots of a 'Find Mentor' web application interface, arranged vertically. Each screenshot shows a mentor profile card with various details and interactive elements.

Screenshot 1 (Top): Shows the 'Applied Filter' section with 'Short Filters' applied. Under 'Tag', 'Ex.Web' is selected. Under 'Language', 'Ex.Java' is selected. Under 'Domain', 'Ex.Data Science' is selected. Under 'Expertise', 'Ex.BVM' is selected. The mentor profile for 'jay' is shown, including a bio, availability, and a 'Request a Call' button.

Screenshot 2 (Middle): Shows the same 'Applied Filter' section. The mentor profile for 'jay' is shown again, with a different bio and a 'View Profile' button instead of 'Request a Call'.

Screenshot 3 (Bottom): Shows the same 'Applied Filter' section. The mentor profile for 'siddharth' is shown, with a bio and a note indicating 'Next available - Monday'.

Blog by Mentor

The screenshot shows a list of three blog posts:

- Blockchain** (IT, 1.4 K likes)
Machine Learning is the field of study that gives computers the capability to learn without being explicitly programmed. ML is one of the most exciting technologies that one would have ever come across. As it is evident from the name, it gives the computer that makes it more similar to humans: The ability to learn. Machine learning is actively being used today, perhaps in many more places than one would expect.
Tags: JavaScript, React, Next
Author: Jay Sojitra
- Best Resources need to top in MBBS First Year** (IT, 1.6 K likes)
Machine Learning is the field of study that gives computers the capability to learn without being explicitly programmed. ML is one of the most exciting technologies that one would have ever come across. As it is evident from the name, it gives the computer that makes it more similar to humans: The ability to learn. Machine learning is actively being used today, perhaps in many more places than one would expect.
Tags: JavaScript, React, Next
Author: Siddharth Patel
- Machine Learning** (CE, 1.4 K likes)
Machine Learning is the field of study that gives computers the capability to learn without being explicitly programmed. ML is one of the most exciting technologies that one would have ever come across. As it is evident from the name, it gives the computer that makes it more similar to humans: The ability to learn. Machine learning is actively being used today, perhaps in many more places than one would expect.
Tags: JavaScript, React, Next
Author: Dharmesh Vora

Full Blog Page

Attendance management system using machine learning

Author: Jay Sojitra updated 11 hours ago 1.2 K likes

Machine Learning, as the name says, is all about machines learning automatically without being explicitly programmed or learning without any direct human intervention. This machine learning process starts with feeding them good quality data and then training the machines by building various machine learning models using the data and different algorithms. The choice of algorithms depends on what type of data we have and what kind of task we are trying to automate.

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Tag

- Machine Learning
- Python
- JavaScript

Resources

The screenshot shows a search interface for resources. At the top, there's a header with "Applied Filter" and a "Short Filters" section containing "Tag", "Language", "Domain", and "University" with sub-options like "Ex.Web", "Ex.Java", "Ex.Data Science", and "Ex.BVM". Below this, there are three resource cards, each featuring the "allevents.in" logo and the text "The event discovery app for your city".

- Title:** Information Security
Author: siddharth
Some quick example text to build on the card title and make up the bulk of the card's content.
Upload by Yash parsana
[Download](#)
- Title:** Information Security
Author: siddharth
Some quick example text to build on the card title and make up the bulk of the card's content.
Upload by Yash parsana
[Download](#)
- Title:** Information Security
Author: Dharmesh Vala
Some quick example text to build on the card title and make up the bulk of the card's content.
Upload by Yash parsana
[Download](#)

Event Page

The screenshot shows an event page interface. At the top, there's a navigation bar with icons for Find Mentor, Events, Blog, Roadmap, Community, Resources (which is the active tab), About, and Contact. To the right is a user profile icon and a "Notifications" sidebar. The sidebar contains several notifications with the text "And here's some **amazing** content. It's very engaging, right?". Below the navigation is a search bar with the placeholder "search by name".

Underneath the search bar is a "Applied Filter" section and a "Short Filters" section with the same options as the first screenshot. Below these are three event cards, each featuring the "allevents.in" logo and the text "The event discovery app for your city".

- Title:** Information Security
- Title:** Information Security
- Title:** Information Security

Mentor Profile Page(private to Mentor)



Dharmesh
Va..
Dvala453@gmail.com

Profile

Dashboard

Events

resources

History

Logout

My Profile

Menter Name
Dharmesh Vala

Intro
Re-engineer curricula to meet global employment requirements. Promote innovative practices at all levels.

Email
dvala453@gmail.com

Type
Private

Address
Mota Bazar, Vallabh Vidyanagar

District
Anand

State
Gujarat

Languages
English

Technology:
Ex. Web Development

Mentoring History



Dharmesh
Va..
Dvala453@gmail.com

Profile

Dashboard

Events

resources

History

Logout

Your History

Enter the project

Search

Date	Time	Icon	Mentee Name	Mentoring Type	Duration	Action
27/09/2022	07.00PM		Dharmesh Vala	individual mentoring	20 mins	
27/08/2025	05:45 PM		Akshay Jadav	individual mentoring	20 mins	
27/01/2001	04:35 PM		Vishant Wali	individual mentoring	18 mins	
27/09/2018	09:25 AM		Tejas Tank	individual mentoring	75min	
27/09/2018	09:25 AM		Tejas Tank	individual mentoring	75min	
27/09/2018	09:25 AM		Tejas Tank	individual mentoring	75min	

Mentee Profile Page(private to Mentee)



Dharmesh Vala
dvala453@gmail.com

My Profile

First Name	Last Name
jay	Sojitra
About Me	
i am student	
Gender	DOB
male	10/11/2002
Passing Year	SkillSet
2022	react
College Name	
bvm	
Department Name	
{singleUser.DepartmentName}	

Profile Picture



Edit Picture

My Profile

History

Logout

Submit

Point



Master
★ 576

Individual Chat

Your Chats

-  [kapa](#)
-  [anand](#)

kapa

HOW ARE YOU? 

WHTS YOUR STATUS ON YOUR PROJECT 

KEEP IT UP 

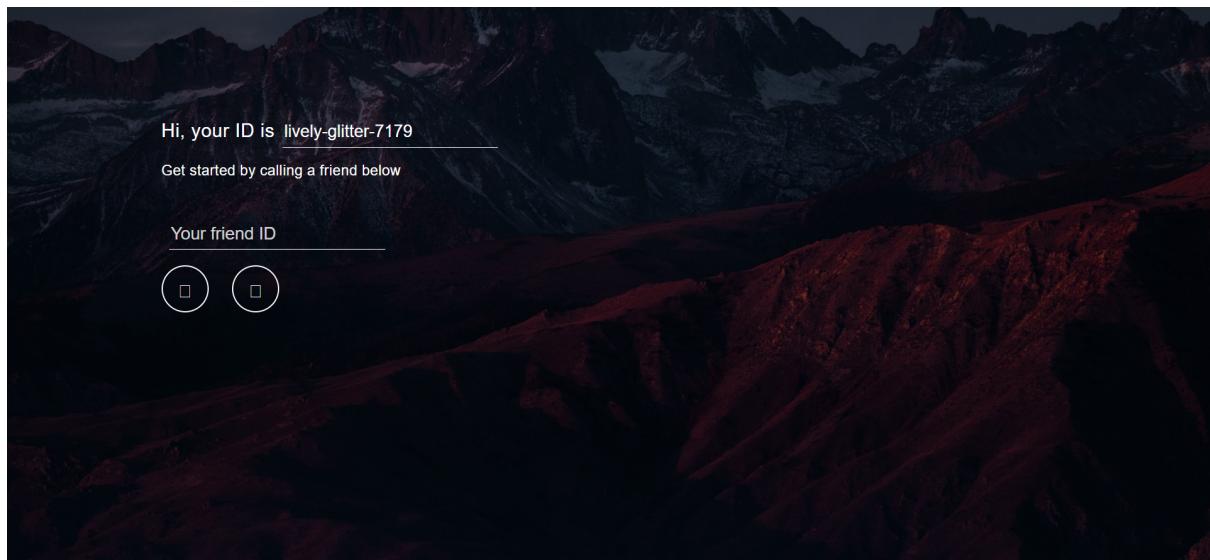
TM002487 

NICEEE 

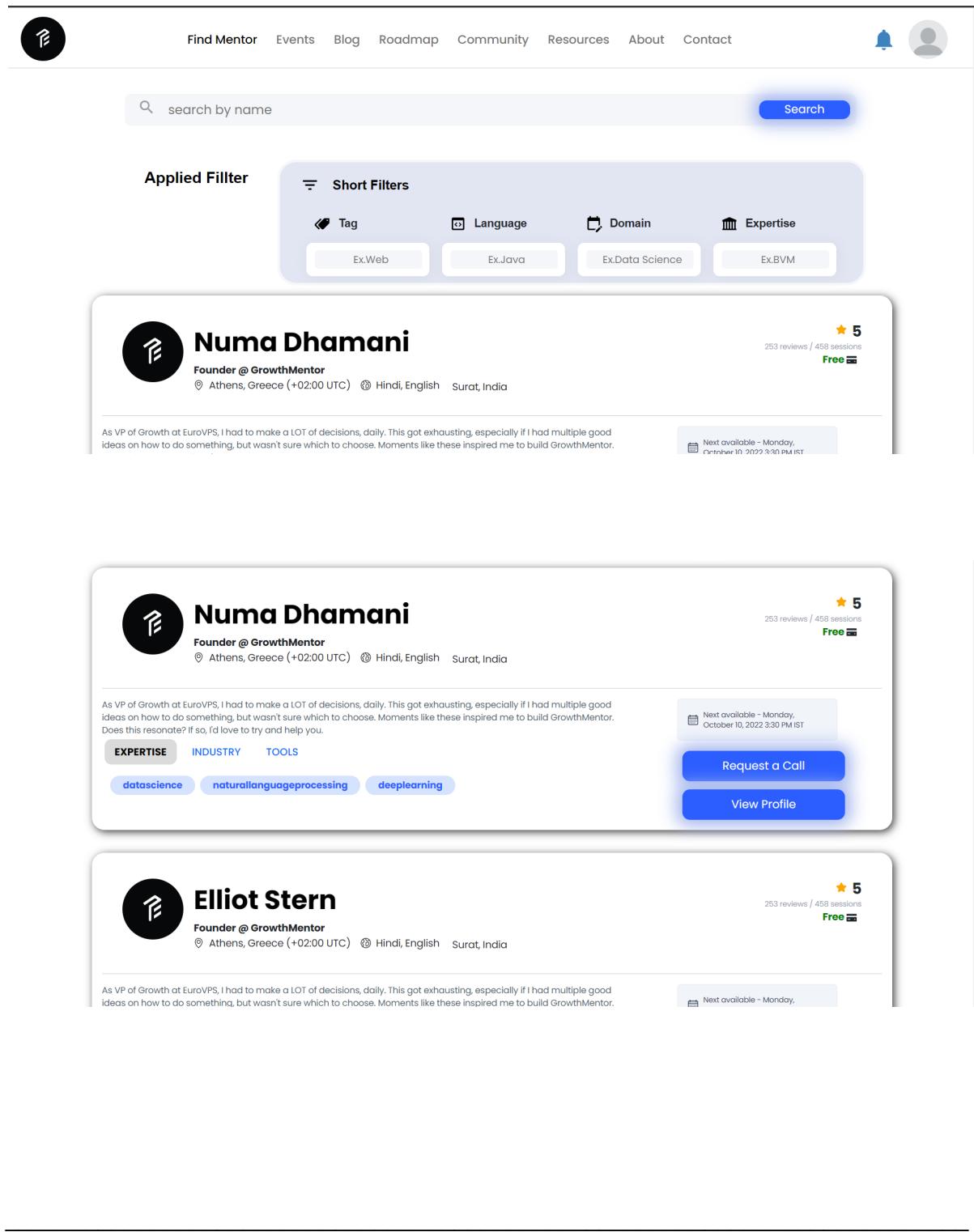
COOL 



Individual Mentoring VIDEO CHAT



Recommendation Algorithm(Mentor Matching Algorithm)



The screenshot displays a user interface for a mentor matching platform. At the top, there is a navigation bar with links for "Find Mentor", "Events", "Blog", "Roadmap", "Community", "Resources", "About", and "Contact". There are also icons for a bell通知 and a user profile.

Below the navigation bar is a search bar with the placeholder "search by name" and a "Search" button.

The main content area shows three mentor profiles:

- Numa Dhamani**:
 - Profile picture: A black circle with a white stylized letter 'F'.
 - Name: Numa Dhamani
 - Title: Founder @ GrowthMentor
 - Location: Athens, Greece (+02:00 UTC)
 - Language: Hindi, English
 - Expertise: Surat, India
 - Rating: ★ 5 (253 reviews / 458 sessions)
 - Status: Free
 - Availability: Next available - Monday, October 10, 2022 3:30 PM IST
 - Description: As VP of Growth at EuroVPS, I had to make a LOT of decisions, daily. This got exhausting, especially if I had multiple good ideas on how to do something, but wasn't sure which to choose. Moments like these inspired me to build GrowthMentor. Does this resonate? If so, I'd love to try and help you.
 - Buttons: Request a Call (blue), View Profile (blue).
- Elliot Stern**:
 - Profile picture: A black circle with a white stylized letter 'E'.
 - Name: Elliot Stern
 - Title: Founder @ GrowthMentor
 - Location: Athens, Greece (+02:00 UTC)
 - Language: Hindi, English
 - Expertise: Surat, India
 - Rating: ★ 5 (253 reviews / 458 sessions)
 - Status: Free
 - Availability: Next available - Monday, October 10, 2022 3:30 PM IST
 - Description: As VP of Growth at EuroVPS, I had to make a LOT of decisions, daily. This got exhausting, especially if I had multiple good ideas on how to do something, but wasn't sure which to choose. Moments like these inspired me to build GrowthMentor.
 - Buttons: Request a Call (blue), View Profile (blue).
- Another partially visible profile:
 - Profile picture: A black circle with a white stylized letter 'G'.
 - Name: [Partially visible]
 - Title: Founder @ GrowthMentor
 - Location: [Partially visible]
 - Language: [Partially visible]
 - Expertise: [Partially visible]
 - Rating: ★ 5 (253 reviews / 458 sessions)
 - Status: Free
 - Availability: [Partially visible]
 - Description: [Partially visible]
 - Buttons: Request a Call (blue), View Profile (blue).