EVALUATING THE EFFECTIVENESS OF IDEA HUBS IN ACCELERATING TECHNOLOGY STARTUPS: INSIGHTS FROM THE COMPUTER SCIENCE LANDSCAPE

Shoaib Akhtar[1], Prathmesh Wani[2], Shivam Shah[3], Prof. Jagruti Mahajan[4]

[1,2,3,4]Department of Computer Science and Engineering, Thakur Shiv Kumar Singh Memorial Engineering College Burhanpur (MP), India.

ABSTRACT

The Idea Hub is an innovative platform aimed at empowering creative thinkers through enhanced collaboration, idea sharing, and community engagement. This research outlines the platform's user-friendly interface, which facilitates the global exchange of innovative ideas while allowing individuals to receive constructive feedback and connect with like-minded individuals. Departing from traditional brainstorming methods, Idea Hub establishes a virtual ecosystem that nurtures creativity and expedites the idea incubation process. Key features include user authentication, idea submission and management, commenting capabilities, user following, and customizable themes.

1. INTRODUCTION

Idea Hub is a dynamic and innovative web application designed to empower creative thinkers and foster a collaborative environment for idea sharing and community engagement. The platform serves as a centralized hub where individuals, teams, and organizations can share their innovative ideas, receive constructive feedback, and connect with like-minded individuals to bring their visions to life. In an era where the rapid evolution of technology demands creative solutions to complex challenges, Idea Hub provides a modern, user-friendly solution that simplifies and enhances the ideation process. The platform prioritizes accessibility and scalability, ensuring that users can log in securely from anywhere, track their ideas, and manage their activities with ease. Each user is provided with a unique profile upon registration, enabling them to organize their ideas, follow discussions, and engage effectively with others. Unlike traditional approaches that scatter creativity across disparate tools or platforms, Idea Hub consolidates the ideation process into a single, cohesive system. Its centralized design fosters a streamlined workflow where creativity and productivity intersect. Additionally, the platform's responsive design ensures compatibility across a wide range of devices, allowing users to share ideas or provide feedback anytime, anywhere.

Its intuitive interface makes it easy to navigate, while a robust data management system ensures secure storage and retrieval of user-generated content.

2. OBJECTIVE OF PROJECT

The main objective of this project is to provide a centralized platform for all computer science related resources, saving users the time and effort spent searching across multiple platforms. Designed on the principle of "click and gain," this web application offers a seamless experience for accessing reliable, organized information. The platform, created for the TVA organization, is accessible both internally and externally with secure session management. It caters to students, organizations, and individuals looking to explore and apply computer science concepts in the present and future. Additionally, the application simplifies user management by allowing easy record organization through intuitive tools. This ensures a personalized experience for every user while enhancing efficiency. Overall, this project serves as a comprehensive, professionally developed hub for learning, growth, and innovation.

3. LIMITATIONS:

While Idea Hub offers several benefits, it also has some limitations: -

- There is no admin functionality for managing users or content centrally. ● While users can personalize their profiles and themes, other customizations are limited.
- Although users can share and discuss ideas, there are no built-in tools for direct collaboration (like real-time editing or group work).
- It does not support the ability to share other media such as images or audio-video with ideas, in it as of now.
- It does not support the ability to share very large size ideas.
- Not as performance efficient as it needs to be.

MOTIVATION

The motivation behind developing Idea Hub stems from the need to reduce the time and effort required to share and access creative ideas across various platforms. While using existing tools and forums, it became apparent that there was

no unified platform that offered a seamless experience for brainstorming, collaboration, and community engagement. Most existing platforms lacked the functionality to consolidate diverse features like idea sharing, feedback, and discussion into a single cohesive system. Additionally, there was no streamlined way for users to connect, ask questions, or collaborate with a community of like-minded individuals. Idea Hub addresses these gaps by providing a centralized hub where users can submit ideas, engage in meaningful discussions, and gain insights—all in one place. With its interactive and user-friendly design, Idea Hub not only saves time but also fosters creativity and builds

connections, making it the ideal platform for innovators, teams, and organizations. Then I got the idea of creating a comprehensive web app designed to simplify access to information and foster knowledge sharing.

This inspired me to develop 'Idea Hub.' Idea Hub provides the following features:

1. User login and registration system for secure profile management.

2. Users can submit, share, and refine their ideas.

3. Interactive commenting for feedback and idea improvement.

4. A following system to connect with and learn from others.

5. Personalized theme settings for an engaging user experience.

6. A clean, user-friendly interface that ensures easy navigation.

7. Responsive design for seamless use on all devices.

8. Efficient storage and management of user-generated content.

9. Tools for users to provide feedback and ask questions.

APPLICATION

Idea Hub is a global platform designed for:

1. Innovators and thinkers looking for a collaborative space.

2. Managing ideas in one place with minimal effort.

3. Offering a simplified and intuitive interface to save time.

4. Reducing the dependency on scattered tools and manual effort.

5.Encouraging creativity, knowledge exchange, and networking.

6. This web app provide easy interface to User.

FEASIBILITY STUDY

Feasibility Study in Software Engineering is a study to evaluate feasibility of proposed project or system. Feasibility study is one of stage among important four stages of Software Project Management Process. As name suggests feasibility study is the feasibility analysis or it is a measure of the software product in terms of how much beneficial product development will be for the organization in a practical point of view. Feasibility study is carried out based on many purposes to analyses that are descried below:

1. Technical Feasibility: In Technical Feasibility current resources both hardware software along with required technology are analysed/assessed to develop project.

2. Operational Feasibility: In Operational Feasibility degree of providing service to requirements is analysed along with how much easy product will be to operate and maintenance after deployment.

3. Economic Feasibility: In Economic Feasibility study cost and benefit of the project is analysed. Means under this feasibility study a detail analysis is carried out.

4. Legal Feasibility: In Legal Feasibility study project is analysed in legality point of view. This includes analysing barriers of legal implementation of project, data protection acts etc.

5. Schedule Feasibility: In Schedule Feasibility Study mainly timelines/deadlines is analysed for proposed project which includes how many times teams will take to complete final project.
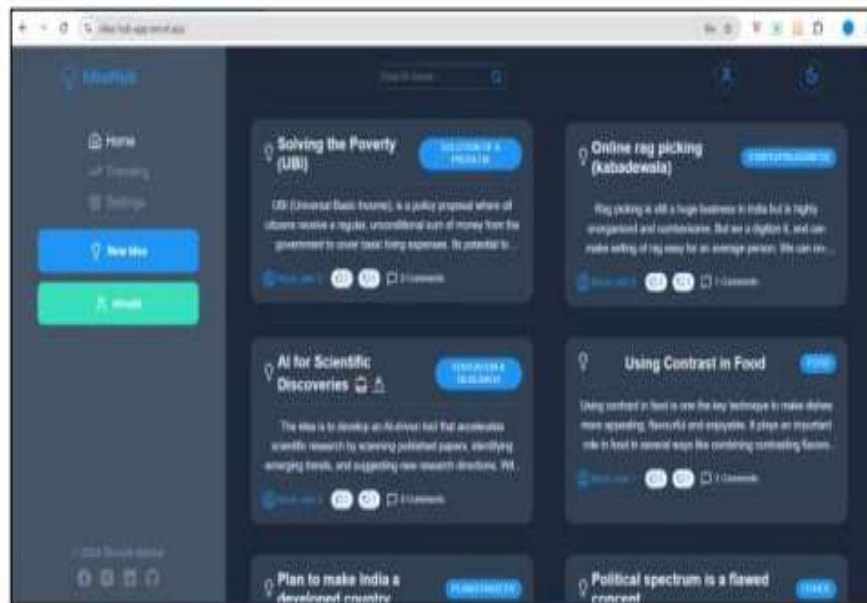
4. RESULTS

Fig 4.1 Home Page of Idea Hub web application

5. CONCLUSION

In conclusion, Idea Hub offers a comprehensive platform for users to access and share innovative ideas, collaborate, and engage with others in a secure environment. It provides a rich array of features, including idea submission, profile management, discussions, and content sharing, making it a valuable resource for creative thinkers and innovators. However, one limitation of this platform is that it does not currently support any online payment options for premium features or services. It represents a successful fusion of creativity and technology. The journey through development has provided us the valuable insights and learning experiences that we needed. This project had taught us the fundamentals of the Web development, Git and GitHub, API integration and testing, whole MERN stack, Vencel deployment, error logging and bug fixing techniques and much more.

We are truly delighted for working on this project and thankful to all the people involved in helping us making this concept a reality, especially our encouraging friends and guiding faculty members.

6. FUTURE SCOPE

In the future, Idea Hub aims to introduce features that allow users to securely pay for premium services or courses directly through the platform.

- Additionally, there are plans to integrate a live, real-time communication and messaging system that will enable users to interact in real-time, fostering better collaboration and idea exchange.
- This project is aimed to be refined in near future in order to address the mentioned limitations.
- We are hoping to make it more performance and memory efficient in further updates.
- We are also considering adding various new features and functionalities such as push notifications, messaging/chatting, integration of various useful APIs, as well adding an AI chatbot for help as well as idea discussions.
- A better recommendation algorithm based on ML rather than content-based recommendation of current implementation.

7. REFERENCES

[1] John Duckett, HTML and CSS: Design and Build Websites, 2015.

[2] Mastering HTML, CSS & Javascript Web Publishing Paperback, 2016.

[3] Elmasri Ramez, Fundamentals of Database System, Seventh Edition, 2017.

[4] Ronald J. Leach, Introduction to Software Engineering, 2017.

[5] C Severance-IEEE Project Management journal, Macc Hills, P Clint-IEEE Software Evolution, 2018.

[6] J Liebowitz-IEEE IT Projects, 2020.

[7] S Gupta, BB Gupta-IEEE Journal of Computer Science and Technology, 2020.

[8]   Charles Bell, Expert MySQL (Expert's Voice in Databases) Paperback, 2021.

[9]   I Abudani, M Alenezi-IEEE journal of Web Applications, 2021.

[10]   M Kuhrmann, Tell-IEEE journal on Software Development Risks, 2021.

[11]   Pa Laplante-IEEE journal on Requirement Engineering, 2022

ABBREVIATIONS

[12]   HTML: Hypertext Markup Language

[13]   CSS: Cascading Style Sheet

[14]   JS: JavaScript

[15]   UML: Unifies Modeling Language

[16]   DFD: Data Flow Diagram

[17]   ERD: Entity Relationship Diagram

[18]   DFD: Data Flow Diagram

[19]   MERN: MongoDB Express React and NodeJs

[20]   AI: Artificial Intelligence

[21]   ML: Machine Learning