

PROJECT BUDDY

Siddarth Singh¹, Lavy Sharma², Sparsh Malhotra³, Agrima Sawhney⁴, Mrs. Kirti Kushwah⁵
^{1, 2, 3, 4} B.Tech(C.S.E) Scholar, Inderprastha Engineering College, Ghaziabad
⁵ Assistant Professor, Inderprastha Engineering College, Ghaziabad

Abstract

Students embarking on IT projects often confront multiple challenges when searching for a suitable team. These challenges include skill mismatches, team formation issues, logistical problems, and goal misalignment. Understanding these problems is crucial to finding effective solutions and ensuring successful collaboration among students working on IT projects. By addressing these challenges, students can enhance their project outcomes and develop valuable teamwork skills that will serve them well in their future careers. Here, Project Buddy comes into the picture. It is a tool that allows students and working professionals with a project idea to register online on a dedicated platform. Once registered to a specific theme or tech stack, project ideas can be discussed and a search for ideal partners made. Best of all, it's completely free to sign up for an account and get started.

Keywords: project buddy, partner search, website, programming community.

I. INTRODUCTION

Currently, Students face a lot of issues while searching for a team to work on a project. It's a tedious task to find people with similar tech stacks and interests to solve a problem. Platforms like LinkedIn, Twitter, Discord, Github may prove to be helpful but most of the time they do not yield desired results. There is no centralised platform where students can connect with like-minded individuals and collaborate with each other. As a result people mostly try to work solely on their projects or may end up with a makeshift team that doesn't have the required skill to properly execute their ideas and while this doesn't come across as a problem at first, but as the projects move towards their final stages, new complexities and bugs start to show up everyday, the lack of experience and proper knowledge becomes evident.

Project Buddy is a platform where students and working professionals can connect and work on a project together. It promotes the idea that collaborative problem solving leads to better outcomes. Working in a team encourages personal growth, increases job satisfaction, and reduces stress. In Project Buddy, a user can create his/her profile by providing his/her preferred tech stack, skills, Github collaborations etc. If someone has a project idea to work on, he/she can filter developers based on their tech stack and connect with them to work on that project.

II. LITERATURE REVIEW

Project Buddy is a platform designed to connect students and working professionals for collaborative project work in specific domains. This literature review aims to explore the existing research and related works in the field of collaborative project management, online platforms for professional networking, and educational platforms. By examining the current literature, we can gain insights into the potential benefits and challenges of Project Buddy and identify areas for improvement and future development.

- **Collaborative Project Management:** Collaborative project management platforms have gained significant attention in recent years. Research by Sauer, Liu, and Johnston (2019) highlights the importance of collaboration in project success, emphasizing the need for effective tools and platforms that facilitate communication, coordination, and knowledge sharing among team members. Project Buddy aligns with this research by providing a platform that enables individuals to connect, collaborate, and work together towards project goal.
- **Online Professional Networking:** Platforms such as LinkedIn have revolutionized professional networking by connecting individuals based on their skills, experiences, and career goals. Research by

Jansen, Zhang, Sobel, and Chowdury (2009) highlights the benefits of online professional networking in terms of career development, knowledge exchange, and fostering collaboration. Project Buddy extends this concept by focusing on project-specific collaboration, offering a unique opportunity for students and professionals to work together on real-world projects.

- **Challenges and Opportunities:** While collaborative platforms like Project Buddy offer numerous benefits, several challenges and opportunities must be considered. Research by Zhao and Rosson (2009) highlights the importance of trust, communication, and coordination in online collaborative environments. Designing features that foster trust and effective communication among users would enhance the user experience on Project Buddy. Additionally, integrating project management tools, as suggested by Hertel, Niedner, and Herrmann (2003), could streamline project workflows and improve productivity.

III. METHODOLOGY

The list of technologies and frameworks used in this project is as follows : d.

Frontend of the Project

1. React.js - Free and open-source front-end JavaScript library for building user interfaces based on UI components. React is an efficient, flexible, and open-source JavaScript framework library that allows developers to create simple, fast, and scalable web applications. Jordan Walke, a software engineer who was working for Facebook created React. It was first deployed on the news feed of Facebook in 2011 and on Instagram in 2012. Developers from the Javascript background can easily develop web applications with the help of React. React Hooks will allow you to use the state and other features of React in which requires a class to be written by you. In simple words, we can say that, React Hooks are the functions that will connect React state with the lifecycle features from the function components. React Hooks is among the features that are implemented latest in the version React 16.8.

2. Next.js - Nextjs is used for server side rendering and routing of the web pages. Next.js is a flexible React framework that gives you building blocks to create fast web applications. But what exactly do we mean by this? Let's spend some time expanding on what React and Next.js are and how they can help. Building Blocks of a Web Application. There are a few things you need to consider when building modern applications. Such as:

- **User Interface** - how users will consume and interact with your application.
- **Routing** - how users navigate between different parts of your application
- **Data Fetching** - where your data lives and how to get it.
- **Rendering** - when and where you render static or dynamic content.
- **Integrations** - what third-party services you use (CMS, auth, payments, etc) and how you connect to them.
- **Infrastructure** - where you deploy, store, and run your application code (Serverless, CDN, Edge, etc).
- **Performance** - how to optimise your application for end-users.
- **Scalability** - how your application adapts as your team, data, and traffic grow.
- **Developer Experience** - your team's experience building and maintaining your application.

For each part of your application, you will need to decide whether you will build a solution yourself or use other tools such as libraries and frameworks.

Backend of the Project

1. Node.js - Node.js is an open-source, cross-platform JavaScript runtime environment built on Chrome's V8 JavaScript engine. It allows developers to run JavaScript on the server-side, enabling them to write server-side applications with JavaScript.

Node.js provides an event-driven, non-blocking I/O model that makes it lightweight and efficient. It also has a large number of libraries and modules available through the Node Package Manager (npm) that can be easily installed and used in Node.js applications.

Node.js is widely used for building scalable, high-performance web applications, real-time applications, APIs, and microservices. It is also used for building desktop applications, command-line tools, and IoT applications.

2. Express.js - Express.js is a popular open-source web application framework for Node.js that provides a robust set of features for building web applications and APIs. It provides a lightweight and flexible structure for building web applications and APIs, making it easier to write server-side code in Node.js.

Express.js is built on top of Node.js and provides a set of middleware functions that can be used to handle HTTP requests and responses, such as parsing request bodies, handling cookies and sessions, and serving static files. It also provides a routing system that allows developers to define the routes for their web application or API.

Express.js is known for its simplicity and ease of use, making it a popular choice among Node.js developers. It is also highly customizable and extensible, with a large number of third-party modules available through the Node Package Manager (npm) that can be easily integrated into Express.js applications.

3. MongoDB - MongoDB is a popular open-source NoSQL database system that is designed to store and manage large volumes of structured, semi-structured, and unstructured data. It is a document-oriented database that stores data in flexible, JSON-like documents, instead of using tables and rows like traditional relational databases. MongoDB provides a rich set of features that make it an attractive choice for developers, including dynamic schema design, easy scalability, automatic sharding, powerful querying and indexing capabilities, and support for geospatial data and full-text search.

One of the key benefits of MongoDB is its ability to handle large volumes of data with high performance and scalability. It is often used in web applications, mobile applications, IoT applications, and other use cases that require real-time processing and analysis of large amounts of data.

MongoDB also has a vibrant community of developers and a rich ecosystem of third-party tools and services, including drivers for popular programming languages, powerful GUI tools, and cloud services like MongoDB Atlas that provide managed database hosting and automatic scaling.

IV. CONCLUSION

- After completion of the project, one can connect with the people working on the same tech stack and can share ideas regarding any technological advancements that they can bring upon. People will be able to make their accounts and network with people of similar expertise and interest.
- In Project Buddy, a user can create his/her profile by providing his/her preferred tech stack, skills, GitHub collaborations etc.

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