

# STUDENT^2

## **1. Product Title**

Student Square - A Private Campus Networking & Community Platform for College Students

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## **2. Describe Your Product.**

Student Square is a private, verified campus networking and community platform designed to connect students, seniors, alumni, clubs, and college departments within a single trusted digital ecosystem.

The platform addresses the problem of fragmented communication, weak mentorship networks, and limited peer interaction commonly found in colleges. By allowing only college email-based authentication, Student Square ensures a secure and exclusive environment for meaningful engagement.

It enables students to build detailed profiles, share updates, connect through one-to-one messaging, discover peers, seniors, and alumni, seek collaborations, and stay informed about official college and club announcements. Additionally, a smart random matching feature encourages spontaneous yet purposeful connections, helping students build friendships, mentorship relationships, and professional networks.

Student Square aims to enhance campus culture, promote collaboration, and create a sense of belonging while supporting students' social, academic, and career growth through a unified digital platform.

Unlike any traditional social media that is open and distracting, our app focuses on a closed college network ensuring a safe relevant and meaningful environment for students.

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## **3. Why has the team chosen this product to develop?**

Speaking personally, the first few months of college were really difficult for me. Everything suddenly changed from school to college, and I struggled to find people with similar interests or mindset. I didn't know whom to reach out to for guidance, whether it was academics, projects, or life in general. Students come from very different backgrounds and mindset, which makes it harder to connect easily.

Picture this: a student who has just entered college, living in a hostel while most of his batchmates are day scholars. Making friends, finding guidance, or even having company becomes tough. On top of that, his two roommates are childhood friends and not very interested in studies. It becomes hard to stay motivated, find study partners, or build a productive routine. Guess who I'm talking about? Yeah, that was me.

Over time, I realized how important it is to have the right people around you. Your environment and your circle shape who you become. Not everyone finds their people easily, either offline or on social media. This experience is very personal to me, and that is why I want to build a real solution instead of just another superficial idea.

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#### **4. What Problem(s) it solves?**

Student Square addresses several real and interconnected problems faced by college students in their daily academic and social life. One of the major issues is the lack of a single, trusted platform where students can connect meaningfully with peers, seniors, and alumni. Important college and club updates are often scattered across multiple WhatsApp groups, emails, and notice boards, leading to missed information and confusion.

Juniors frequently struggle to find proper guidance, mentorship, and academic or career support, while alumni networks remain largely inactive after graduation. As a result, opportunities for collaboration, learning, and networking are often lost.

Additionally, forming genuine friendships and professional connections on campus mostly happens by chance rather than through structured interaction. Student Square brings all these elements into one secure and organized digital space, enabling smoother communication, stronger mentorship, better collaboration, and a more connected and supportive campus community

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#### **5. Who will be the potential clients/customers/users/startups/beneficiaries of the product? Describe appropriately. Why do you think they are your target audience?**

The primary users of Student Square are college students, including juniors, seniors, and final-year students, as they face the most direct challenges related to communication gaps, lack of guidance, and limited collaboration opportunities. Juniors benefit by gaining easier access to seniors and alumni for mentorship, academic help, and career guidance, while seniors can share their experiences, build leadership skills, and expand their professional networks. Alumni form another important group, as the platform allows them to stay connected with their college, mentor students, and engage in meaningful knowledge exchange.

Secondary beneficiaries include student clubs, societies, and campus departments that can use the platform for communication, event promotion, and recruitment. College faculty and administration also benefit indirectly through improved communication, centralized announcements, and increased student engagement. The campus-exclusive model ensures relevance, safety, and meaningful interaction, making students the ideal target users.

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#### **6. What will be the innovation in this project?**

The innovation in Student Square lies in its approach to solving long-standing problems of fragmented communication, weak mentorship, and disconnected campus communities.

##### First Innovation – Verified Private Campus Network:

Unlike traditional social platforms that are open and generic, Student Square creates a secure, closed environment accessible only through college email authentication. This ensures that every user is a verified member of the campus community, which builds trust, safety, and authenticity.

##### Second Innovation – Intent-Based Networking and Collaboration System:

Student Square introduces a structured way for students to connect based on their goals, interests, skills, and requirements rather than random browsing or accidental interactions. Students can actively seek peers, seniors, or alumni for mentorship, project collaboration, startup ideas, or academic support. This transforms casual networking into purposeful engagement, making relationship-building more effective, productive, and goal-oriented.

#### Third Innovation – Smart Random Matching for Meaningful Connections:

The platform integrates a purpose-driven random matching feature that connects students based on shared interests, goals, or learning needs. Unlike conventional random chat systems focused mainly on entertainment, this feature aims to encourage thoughtful conversations, reduce social hesitation, and promote spontaneous yet valuable connections

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### **7. How it will be different from similar existing solutions?**

This problem we have come up is unique on its own. There is no other alternative or solution in the market as we speak.

Most existing platforms solve only one small part of the student ecosystem, whereas Student Square aims to build a complete private digital campus network. The closest existing solutions to our idea are LinkedIn, Discord, and WhatsApp, but each of them has clear limitations in a college environment.

LinkedIn mainly focuses on professional networking and job opportunities. While it is excellent for career growth, it lacks social bonding, casual interaction, and real-time campus engagement. Freshers often feel hesitant to approach seniors or alumni on LinkedIn because the platform feels very formal. Student Square removes this barrier by creating a trusted, verified campus-only environment, making conversations more open, friendly, and approachable.

Discord provides strong community and communication tools, but it is mostly used for gaming and tech communities.

WhatsApp is currently the most used platform for college communication, but it suffers from information overload, spam, and fragmentation across multiple groups. Students are forced to join numerous groups, leading to missed updates, lack of clarity, and mental fatigue.

In contrast to all three, Student Square is designed exclusively for college ecosystems, integrating social connection, career development, alumni interaction, official updates, and peer discovery into one secure platform

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### **8. What makes it challenging enough to be chosen to be done in four months (Jan - May)?**

Student Square is challenging enough to be chosen as a full semester project because it involves designing and building a complete real-world digital platform rather than a simple academic application. The project requires deep thinking in system design, user experience, database architecture, backend logic, real-time communication, and frontend integration. Features such as dynamic social feeds, one on one chat, (networking systems, discovery algorithms - optional) add significant technical and logical complexity.

At the same time, the project has a well-defined and realistic scope that fits a four-month timeline. The work can be logically divided into phases such as planning, backend development, frontend implementation, system integration, testing, and deployment.

The project is too complex to be completed meaningfully in just two months, yet its scope is controlled enough to avoid unnecessary feature expansion beyond four months.

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## **9. How will you measure the success/outcome/quality of your product?**

The success and quality of Student Square will be measured through a combination of technical completion, usability, performance, and real user engagement. One of the primary parameters of achievement will be the successful implementation of all planned core functionalities, including secure authentication, user profiles, social feed, one-to-one chat, networking and discovery features, college updates, and the smart matching system. System stability, responsiveness, and smooth real-time communication will also be important indicators of technical quality.

In addition to technical metrics, user feedback and adoption will play a major role in evaluating the project's success. We plan to conduct beta testing within our college to observe actual usage, gather feedback, and identify areas for improvement.

User-centric metrics such as the number of active users, frequency of interactions, community participation, project collaboration requests, and user retention rates will be used to assess engagement within the campus. Feedback surveys via polling in google forms, whatsapp groups, instagram stories and content will help evaluate ease of use.

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## **10. Resources required for the project and the feasibility of their availability as per the plans.**

On the software side, we will use open-source technologies such as React, Node.js, Express, MongoDB, and GitHub, which are freely available and well-supported by extensive documentation and developer communities.

For development and testing, standard laptops or desktops with a stable internet connection are sufficient.

Cloud platforms such as Vercel, Render, and MongoDB Atlas provide free-tier hosting and database services, making deployment feasible without significant financial cost.

Additional tools like Postman, Figma, and VS Code will be used for API testing, UI design, and coding, all of which are freely available.

Since the project mainly involves software development, no specialized hardware, paid datasets, or expensive equipment are required. This makes the project highly feasible within the available resources.

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## **11. If you are a team of 2 or more then clearly define responsibilities and how each member should be assessed differently.**

Krish Verma (Roll No: S24CSEU2353) is responsible for the overall system design, backend development, frontend integration, real-time communication implementation, database architecture, deployment, and final system testing.

Aryan Raj (Roll No: S24CSEU1441) contributes to because of his proficiency in frontend UI design. Also testing, documentation, and user flow analysis. He assists in designing layouts, validating functionality, and preparing project reports and presentations.

Raj Aryan (Roll No: S24CSEU1461) supports research, requirement analysis, content preparation, and usability feedback. He helps in feature analysis, user experience evaluation, and final project presentation. He would also help with database architecture.

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## **12. Short-term and long-term planning with detailed and logical steps and timelines.**

### Short-Term Planning (January – May):

The first phase focuses on designing, developing, testing, and deploying the core version of the platform. In the initial two weeks, detailed requirement analysis, feature finalization, system architecture design, database schema planning, and UI wireframing will be completed. The next four to six weeks will be dedicated to backend development, including authentication, user management, post systems, networking logic, chat functionality, and database integration. Parallelly, frontend development will begin, focusing on building responsive and user-friendly interfaces for all major modules. The following four weeks will be used for integrating frontend and backend systems, implementing real-time communication, testing features, fixing bugs, and optimizing performance. The final weeks will focus on deployment, beta testing within the campus, spreading awareness, collecting feedback, refining user experience, and preparing documentation, reports, and project demonstrations.

### Long-Term Planning (Post May):

After the academic evaluation, the project will move towards real-world validation and scalability. The first step will involve expanding beta testing across multiple departments and colleges to gather diverse user feedback. Based on insights, system improvements, security upgrades, and feature enhancements will be implemented. Additional functionalities such as advanced recommendation systems, leaderboards, more AI implementation, analytics dashboards for colleges, alumni engagement tools, and event management systems can be introduced. In the long run, the goal is to transform Student Square into a scalable campus SaaS platform by partnering with educational institutions, improving infrastructure, and building a sustainable deployment and

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## **13. Evidence/literature/research/survey etc. in support of the hypothesis or idea to be successful. (Local/National/International Context).**

Over time, many studies in the field of education and digital learning have shown that students perform better when they feel connected, supported, and guided. Research published in journals such as Computers & Education and The International Journal of Educational Technology in Higher Education emphasizes that peer interaction, mentorship, and social belonging play a crucial role in academic performance, emotional well-being, and overall student success. These findings directly validate the

core objective of Student Square, which is to enhance student engagement and connectivity within a trusted campus environment.

At a national level, policies and surveys conducted by organizations such as AICTE, NASSCOM, and the National Education Policy (NEP 2020) highlight the importance of holistic student development. NEP 2020 especially emphasizes peer-based learning, digital integration, alumni involvement, industry exposure, and collaborative academic environments. These initiatives aim to prepare students not just academically, but also socially and professionally.

On an international scale, several campus-based platforms like Piazza, CampusGroups, and UniHub have already demonstrated how effective structured digital communities can be. Studies conducted by organizations such as EDUCAUSE and the Chronicle of Higher Education suggest that students who actively participate in campus networks and peer communities show higher engagement levels, better academic outcomes, and improved emotional well-being.

In addition to academic literature, real-world behavioral trends strongly support this idea. This is something that is followed by top world classs universities like IVY Leagues they are known for their culture, even the tier-1 colleges in our country exist becz of the students. Students shape the colleges, and networks shape students.

From a psychological and social perspective, learning theories such as social learning and community-based learning emphasize that individuals learn better through shared experiences, collaboration, and observation. Being part of a community encourages students to exchange knowledge, develop confidence, and build strong support systems.

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#### **14. Risk Analysis (What are the factors which pose risk of failure of your project and risk of not completing your project by deadline).**

The development of Student Square involves several potential risks that could affect both the success of the project and timely completion. One major risk is technical complexity, as the project includes multiple integrated modules such as authentication, real-time communication, social feed, networking, and matching systems, which may lead to unexpected bugs or system instability. Another risk is time management, since balancing academic workload with project development can cause delays.

To minimize these risks, we have adopted a structured development plan with clear milestones and weekly deliverables. The project scope has been strictly defined to avoid unnecessary feature expansion. Regular testing are being followed to detect and resolve bugs early. Version control through GitHub ensures code stability and progress tracking.

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#### **15. Give Names and emails of Three Persons with whom you have discussed the details of the project and what was their reaction/suggestion.**

The project idea was discussed with individuals from different backgrounds to gain diverse perspectives and practical feedback.

##### **1. Industry Professional-**

Name: Ankita Verma

She is a software developer working in a tech company in Sweden. She appreciated the concept of building a private campus ecosystem and suggested focusing strongly on scalability, security, and clean system architecture. She also advised keeping the initial version simple and user-friendly to ensure better adoption.

## 2. Parent-

Name: Sarabjeet Verma

Email: sarabjeet.verma@yahoo.co.in

He found the idea very meaningful as it solves real student-life problems. He suggested ensuring safety, privacy, and controlled access so that students feel secure while using the platform.

## 3. Friend-

Name: Slogan Sahoo

Email: slogansahoo@gmail.com

He supported the idea and suggested adding collaboration and networking features. His feedback helped refine the discovery and interaction aspects of the platform.

Their feedback helped validate the idea and improve both the technical and practical direction of the project.

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## **16. List down the Ethics, Privacy, Moral and Legal issues related with the project.**

This project is designed while keeping ethical responsibility, user privacy, moral values, and legal compliance in mind. User data is handled securely, and only necessary information is collected to ensure proper functioning of the system. No sensitive personal data is stored or shared without user consent. Proper authentication mechanisms are implemented to prevent unauthorized access and misuse of the platform.

From an ethical perspective, the system promotes fair usage, transparency, and responsible handling of data. The project avoids biased algorithms and ensures equal access for all users. Morally, the platform is built to encourage positive interaction, respectful communication, and safe engagement between users.

Legally, the project follows basic data protection principles such as confidentiality, integrity, and secure storage. Standard security practices like encryption, secure APIs, and authentication are used to comply with data protection norms. Overall, the project fulfills ethical, moral, privacy, and legal standards by ensuring user safety, transparency, and responsible system design.

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