



# NUCESBuzz

## Project Proposal

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## 1. Problem Statement

In a university environment, students often struggle to connect with their peers beyond their immediate social circles or batch groups. There is no dedicated digital platform for FAST NUCES students to communicate efficiently, collaborate on projects, or socialize in a secure and exclusive space. Existing messaging platforms lack university-specific integrations and fail to ensure privacy within a controlled environment. **NUCESBuzz** aims to bridge this gap by providing a secure chat application exclusively for FAST NUCES students, fostering better connectivity and communication among them.

## 2. Project Scope

### Inclusions:

- **User Authentication:** Only FAST NUCES students can register using their university-issued email addresses.
- **Unique Usernames:** Each user is assigned a unique username upon registration.
- **Search and Friend Requests:** Users can search for other students and send friend requests. Messaging is only possible once the request is accepted.
- **Chat System:** Real-time one-on-one messaging between connected users.
- **Status Indicators:** Show whether a user is online or offline.
- **Customizable Profiles:** Users can add profile pictures and bios.

### Exclusions:

- No integration with external social media platforms.
- No end-to-end encryption in the first phase, but basic security measures will be implemented.

### Assumptions:

- All users have access to their university emails.
- Students will follow ethical guidelines while using the platform.

### 3. Tools and Technologies

The project will be built using the **MERN stack**:

- **MongoDB**: For database management, storing user profiles, friend lists, and messages.
- **Express.js**: For handling backend operations and API requests.
- **React.js**: For building an intuitive and responsive frontend UI.
- **Node.js**: For server-side logic and real-time message handling.
- **Socket.io**: For real-time messaging functionality.

### 4. Review of Similar Existing Projects

#### 1. Facebook Messenger

- **Strengths**: Feature-rich, supports multimedia sharing, large user base.
- **Weaknesses**: Not university-specific, lacks academic focus, privacy concerns.

#### 2. WhatsApp

- **Strengths**: Secure, widely used, simple UI.
- **Weaknesses**: No university verification, no structured student networking.

#### 3. Microsoft Teams (University Use)

- **Strengths**: University collaboration features, formal communication.
- **Weaknesses**: Not designed for social connections, complex for casual chat.

### 5. What Makes Your Project Different

- **University-Exclusive Access**: Only FAST NUCES students can join, ensuring a secure and private environment.
- **Controlled Friend Requests**: Unlike public chat apps, users must approve friend requests before engaging in conversations, enhancing privacy.
- **NUCES-Specific Networking**: Encourages inter-batch and inter-department communication, fostering better student collaboration.
- **Minimal and Focused Design**: Unlike complex team collaboration tools like Microsoft Teams, NUCESBuzz focuses on **student-to-student** interactions.

NUCESBuzz sets itself apart by providing a **university-specific** platform that ensures secure, student-only interactions while maintaining a simple, user-friendly experience for both academic and social communication.

