

## **Project Topic/Problem Statement-Part1**

### **Project Topic: Towson University Student Housing (TUSH) Platform(Web)**

#### **Problem Statement :**

Towson University students face significant challenges when trying to find suitable housing through online platforms. Although various housing websites and apps exist, students often struggle to find listings that meet their specific needs, such as proximity to campus, affordability, and compatibility with student life. The current TU Off-campus housing and other listing websites lack a centralised and AI/ML user-friendly platform tailored to Towson University students, leading to the following issues: fragmented listings, scams and unreliable listings, limited roommate matching and poor integration with campus resources.

#### **What is your product, on a high level?**

TUSH is a web-based platform that would streamline the housing search process, improve safety and reliability, and enhance the student experience by offering an AI/ML user-friendly, tailored solution for Towson University students seeking housing online.

#### **Who is it for?**

Current and past students of Towson University.

#### **What problem does it solve?**

The TUSH platform will solve the problem of student housing search, fragmented and unreliable listings, roommate matching and the poor integration of supporting campus resources, local transportation, interactive maps and payment systems.

#### **Describe the top-level objectives**

1. To develop a one-stop portal where students can search for both on-campus and off-campus housing options verified by Towson University or trusted partners.
2. To Implement advanced student search filters such as distance from campus, rental affordability, amenities, lease terms, and proximity to public transportation.
3. To ensure all listings are vetted for authenticity, with landlord background checks and protection against scams.
4. To integrate a personalised roommate-matching system where students can connect based on shared interests, schedules, and compatibility.
5. To Integrate with university services: Coordinate with Towson University's housing office, financial aid, and student services to provide support and guidance throughout the housing search.

## **Differentiators**

1. AI/ML integration to enhance student search
2. Personalized roommate-matching system
3. Integration of university services to support the search process

## **Target customers**

Towson University students

## **Scope - of your product.**

1. Search Functionality
2. Verified Listings
3. Roommate Matching
4. Interactive Map integration
5. Towson University Resources integration
6. Local Transport integration
7. Payment Systems Integration

## **Make it clear that the system can be built, making good use of the available resources and technology.**

This project is fully feasible using current resources and technology. The development team will utilise existing web frameworks like React and Node.js to ensure a responsive, modern user interface and back-end. With cloud infrastructure from AWS, the system can easily scale as the user base grows, while database solutions like PostgreSQL will handle the secure storage of listings and user data. Towson University's existing IT resources, including servers and student data systems, will be leveraged to ensure seamless integration with the campus ecosystem. Furthermore, open-source libraries and APIs will reduce development time, providing the system can be built quickly and cost-effectively. Similar platforms have been successfully implemented, and our development team has the experience to execute this p