Project Title: AggieSit.
Team Members: Ruoran Shi, LAND ’20 Graduate
Sanskruthi Guduri BMEN ’21 Undergraduate
Rupal Gupta BMEN ’21 Undergraduate
Anuj Parakh CSCE ’21 Undergraduate
Lina Zhang CSCE ’21 Undergraduate
Thomas Chin CHEN ’21 Undergraduate

The diversity of this project is reflected in the collaboration between different disciplines and cultural backgrounds. As a team, we are from four different majors, LAND, BMEN, CSCE, CHEN, and we are a combination of undergraduate and graduate students. American, Chinese and Indian cultural backgrounds are merged together in the team. We all learned a lot from each other.

We believe that all students could benefit from making time more efficient. As the library is a popular destination for students to work, we wanted to optimize the time spent at the library to maximize time for working. Many of us have experienced the inability to find seats on certain levels at the library, especially with groups. In addition, students with disabilities may have trouble finding suitable seating options. Our plan is to design an app that allows people to easily see which and where seats are available. We came up with many methods to count people who enter and leave floors. Examples included turnstiles, pressure sensors when walking through entrances, and swiping the student ID to open a gate. However, in order to also let large groups find sufficient places to sit and work, we finally decided on putting pressure sensors on chairs and sofas to determine if they’re occupied.

Our group decided that not only was it necessary to count the number of students who enter each floor of each library, it was necessary to know the location of where each student sits in the library, because we figured large groups would need to identify places where there were many seats available together. We would use a pressure sensor on the leg of each chair that will send a signal to our app when occupied. Tables have bluetooth low energy connections, so moving a chair to another table will connect the chair to that table. This connection can show the location of chairs relative to the tables, which stay still. In addition to the app, the library will have a TV screen stating the availability of each floor. This is really helpful, as most people tend not to download the app, and TV’s could help specify seating for each floor (interactive screens required). As this model allows us to see the availability of seats based on location, disabled students can find suitable seats that will enhance their library experience. Hence, this model shows true promise in both its effectiveness and practicality.