ISU View

Team Thai

Project Description

Iowa State University is a huge campus, which means that finding out where to go and how to get from one location to another, especially for new students, is sometimes impossible. Having a “one-stop shop” to help navigate through campus across buildings and paths, and find rooms, vending machines, offices, and more would be ideal. The end user will be able to choose one location (classroom, building, dining center, parking lot, etc.) and route through campus to a destination. When they reach their building they will also be able to see the floor plan of this building and get navigation directly to their classroom. The app will also be able to selectively path through buildings to save time or to escape from the weather. The app will also be able to estimate arrival times based on class end times, locked buildings, events/fests/stands, or construction that may occur. This core functionality leaves plenty of room for flexibility and additional features. With that said the targeted devices will be mobile devices

(Android). This allows for portability and constant, on-hand, information when traveling from one location to another. Inclusion of a street view with 360 images along the route can help the user find landmarks, rooms, sidewalks, and other important geolocation objects to aid the user in getting where they want to be.

Technologies

Front-End:

Use a map view to take students from current location to desired building. Use images inside building to direct students to specific classroom. The front-end will be modeled after the MyState app. This will allow similar functionality and familiarity. The number of complex screens would be at least 3; Selecting the Location, Routing, and In-Building Routing. There could be more complex screens; For example; class list, bus routing, local pins(vending machines, rooms, etc), 360 street view, building/room information, community screens for adding vending machines, comments, etc.

- Okta Login*
    - Grabbing User Data
- Google Maps Interface
    - Navigation Outside Buildings
- React Native
    - Use to Display Info

Back-End:

Build paths between two buildings/classrooms using data gathered off both the public Google Maps API and building floor plans and querying off our map data to build the most efficient path possible. We can also take user-submitted data into account for things such as icy sidewalks or number of people on a certain bus.

- Spring Boot
    - Used to help connect the application to the Database
- JPA (Java Persistence API)
    - Builds a persistence layer for efficient data access
- MyRide API
    - Current Bus Locations

Team Members

- **Gavin Monroe**
    - Semesters: 5
    - Year: 3 - Senior Classification
    - Experience: 4 years
        - Internship: Iowa State, RISE, Buildertrend, and MCMH

        - Courses: ComS 228, 327, 227, 363, 230, 311, 319, SE 339, SE 185, CPRE 281
        - Languages: PHP, C#, Java, C++, C, Visual Basic, MySQL, ASP.Net, TypeScript, JavaScript, and Testing Frameworks
        - Work: Web Developer, Network Administrator, and Full Stack Developer
- **Jacob Spooner**
    - Semesters: 5
    - Year: 3 - Junior Classification
    - Experience: 6 years
        - Internship: Maverick Software Consulting
        - Courses: COMS 227, COMS 228, COMS 252, COMS 327, SE 363, SE 319, CPRE 230, CPRE 231
        - Languages: Java, C, C++, SQL (and variants), Python, PHP | Testing: JUnit, Selenium | Misc: Ivy, Spring
        - Work: Web Tester
- **Christopher Woods**
    - Semesters: 5
    - Year: 3 - Senior Classification
    - Experience: 5 years
        - Internship: Belniak Media, Workiva
        - Courses: S E 185, COM S 227, COM S 228, COM S 230, COM S 311, COM S 327, COM S 363, SE 319, CPR E 230, CPR E 231, CPR E 288
        - Languages: Java, C, C++, JS, SQL, Python, PHP, Dart
        - Work: Web Developer, Full Stack Developer
- **Chris Lopez**
    - Semesters: 5
    - Year: 3
    - Experience: 2 years
        - Internship: Garmin
        - Courses: COMS 227, COMS 228, CprE 288
        - Languages: Java, Swift, C, and Python
        - Work: iOS development