



Project Proposal

Create an accessible navigation app for the Mines campus

Client

Oredigger Disability Activism and Community

Team Size:

4 students

Location:

Mines Campus

Sponsor Overview:

Established in 2021, the Oredigger Disability Activism and Community (ODAC) was founded with the distinct purpose of fostering activism and a sense of unity among the disabled community at Mines. Historically, Mines has had a small population of disabled individuals; however, there has been a notable surge in this demographic in recent years. ODAC is dedicated to ensuring that this growing community is not merely recognized but also empowered.

Our mission is to enhance the accessibility of the campus and to bolster the support mechanisms available for those with distinct needs. Through our endeavors, we aim to cultivate an inclusive environment where disabled Orediggers, along with their allies, can forge meaningful relationships that will enrich their experiences at Mines and set the foundation for lifelong bonds.

Description:

At the Mines campus, there's a recognized need to improve signage for accessible facilities. The current signage is often unclear, causing challenges for individuals needing amenities like elevators and accessible and all gender restrooms. This confusion can lead to increased strain for those with mobility challenges.

To address this, Oredigger Disability Activism and Community (ODAC) is proposing an inclusive navigation app that can be added to the Mines website for everyone to use. This app will:

- Offer directions to accessible facilities.
- Provide real-time status updates, such as elevator outages, for proactive planning.
- Indicate which rooms are designated for classes and office hours, and their respective times.
- Navigate users from Point A to B, preferably indicating accessible routes.
- Include use- filed notices for reporting of facility outages.

By implementing this, we aim for smoother logistical adjustments, like classroom rescheduling due to unforeseen inaccessibility. The entire Mines community will benefit from this enhanced navigation system, with PCJ and Disability Services underlining its importance.

A team from Innovation X has created a prototype using the folium package, which will be sent along with all relevant documentation and research. They have completed a basic map with informational pop ups and basic routing. The goal for this class would be to improve the map if needed, add routing from point A to B, include an interface for facilities to report outages, include an interface for users to report errors or bugs, and include classrooms and offices.

The project execution will involve:

- Crafting a user-centric app interface.
- Building a back-end system for real-time updates on facility statuses.
- Promoting student awareness about accessibility and fostering collaboration with the disabled community at Mines.

Through this initiative, we're committed to making Mines more inclusive and user-friendly.

Objectives:

1. Enhance Visibility and Accessibility of Facilities:

- Eliminate barriers that lead to confusion, strain, and discomfort for those with mobility challenges.

2. Develop a Comprehensive Navigation Application:

- Design an intuitive user interface tailored to aid in locating accessible facilities.
- Incorporate real-time updates on the status of amenities, such as elevator outages, to support effective planning and logistics.

3. Foster Broader Campus Engagement:

- Benefit the entire Mines community by offering streamlined navigation and comprehensive information on campus facilities.

4. Implement a Robust Back-End Reporting System:

- Develop a mechanism for facilities to report promptly on the status of accessible amenities.
- Ensure the app interface reflects these updates in real-time to help users make informed decisions.

5. Ensure Long-Term Sustainability and Usability:

- Ensure that the app is adaptable to future changes or additions in campus facilities.
- Consider feedback loops to continuously refine and improve the application based on user experiences and feedback.

Desired Skills:

- Web-based App Development
- Backend Development
- UI/UX Design
- GIS (Geographical Information System)
- Real-time Data Integration
- Domain knowledge (i.e. understanding campus infrastructure and disability awareness)
- Communication with various Mines departments and students/faculty

Ownership of Intellectual Property:

Students working on this project need to assign ownership of intellectual property to Colorado School of Mines.