



Ur Next Route

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Introduction

Ur Next Route is a mobile safety application designed to keep students, faculty, and visitors safe while navigating UNR's campus, mainly at night. Safety concerns while navigating a college campus, especially at night or when alone, are on the rise. We want to combat this! Inspired by the UNR Safe Pack app, we recognize the need to provide students with more than links or text-based information; our objective is to create a feature-rich and user-friendly application that prioritizes student safety. Our application has features including *pins*, which mark hazards, areas in need of maintenance, or areas users felt unsafe, an *emergency call button*, a map of *blue call lights* on campus, and more.

Problem

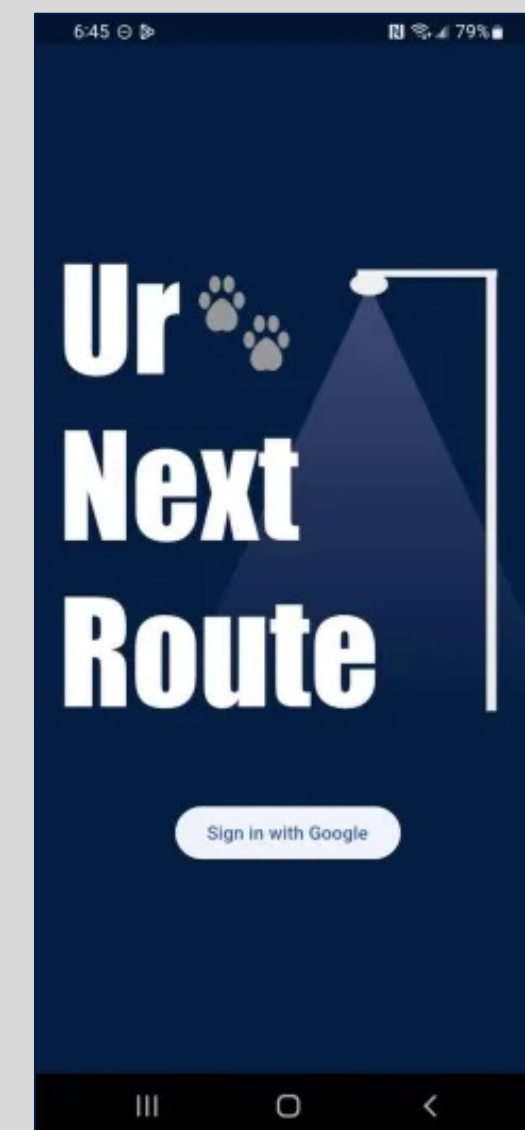
Crime on campus has been on the rise, predominantly at night. We wanted a very simple and user-friendly mobile application that anyone on campus can use and feel more secure.

Development Process

Our mobile safety application is designed using an agile methodology of planning, designing, developing and testing which allows us to collaboratively manage this project while continuously integrating new features. For our tech stack, we are using Flutter and Dart for our front end along with Python and MySQL for our database and backend. The Flutter framework allows us to build our android application efficiently through the utilization of customizable widgets and their hot-reload feature.

Features

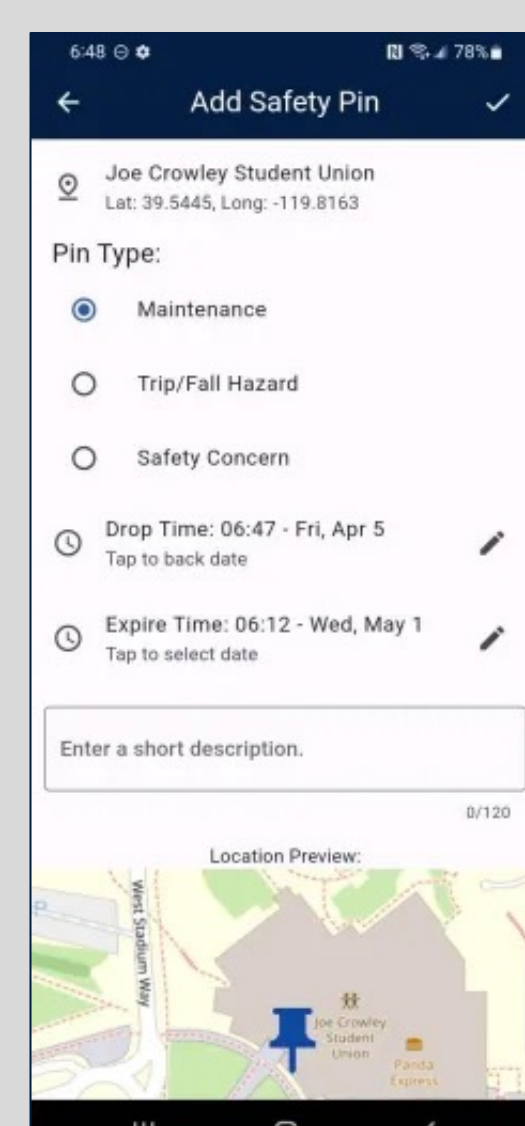
Google Sign-In



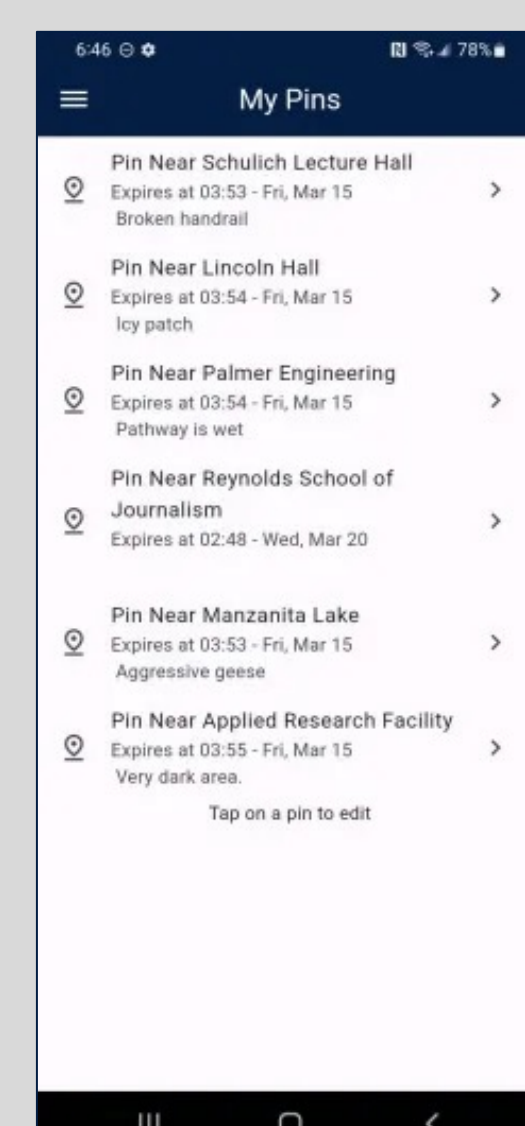
Map Home Page



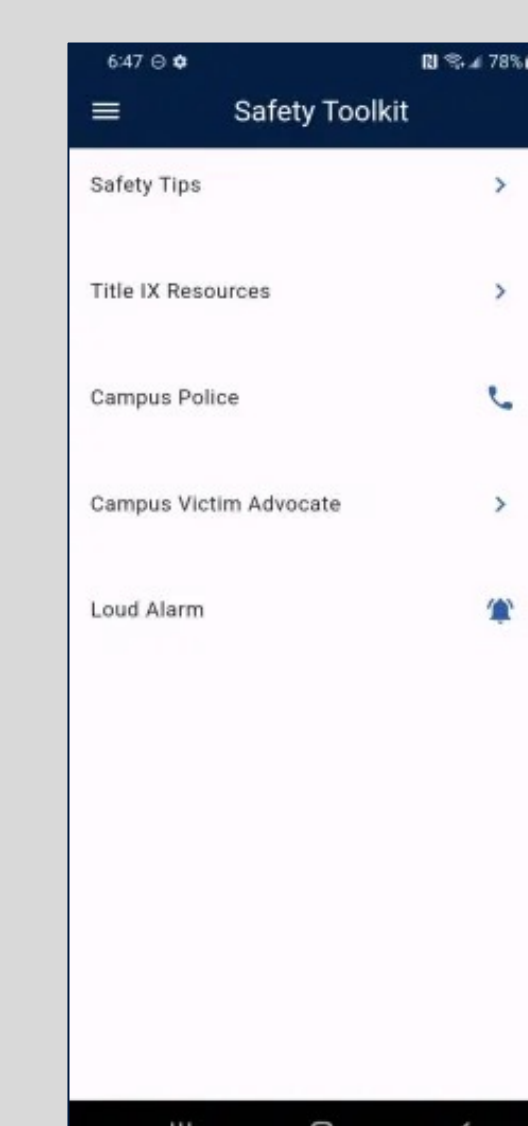
Drop Pins



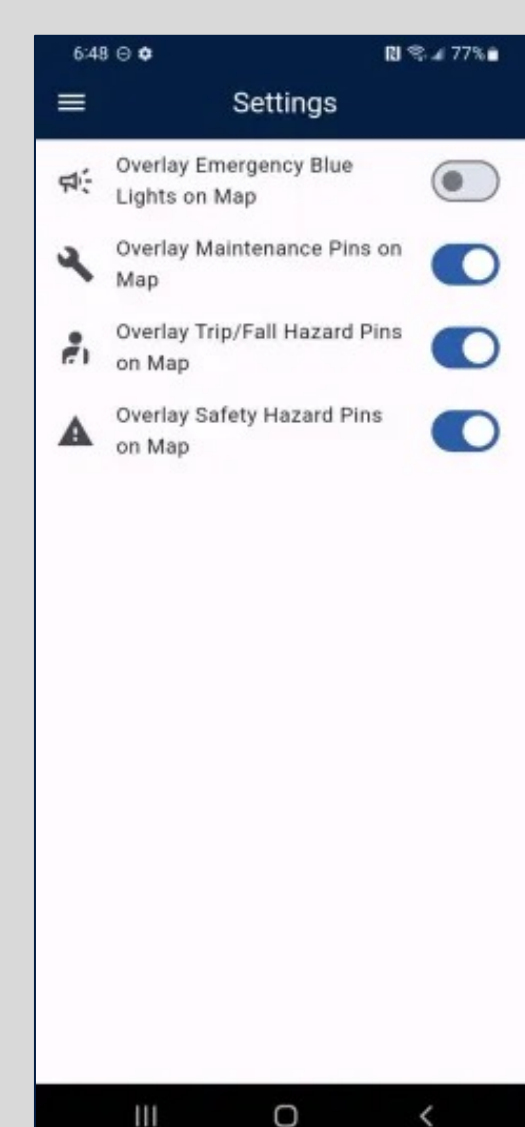
My Pins Page



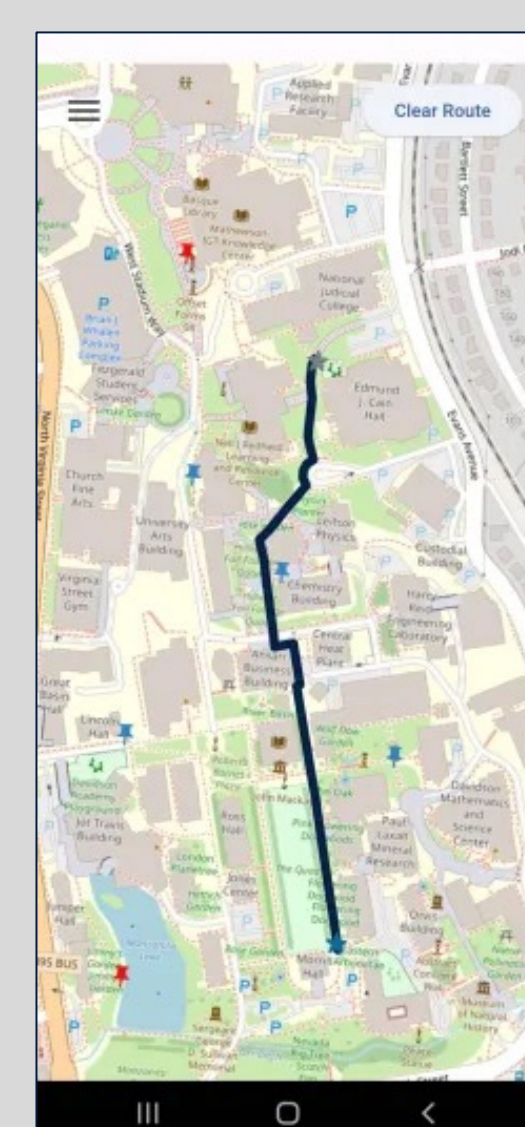
Safety Tool Kit



Settings Page



Route Generation

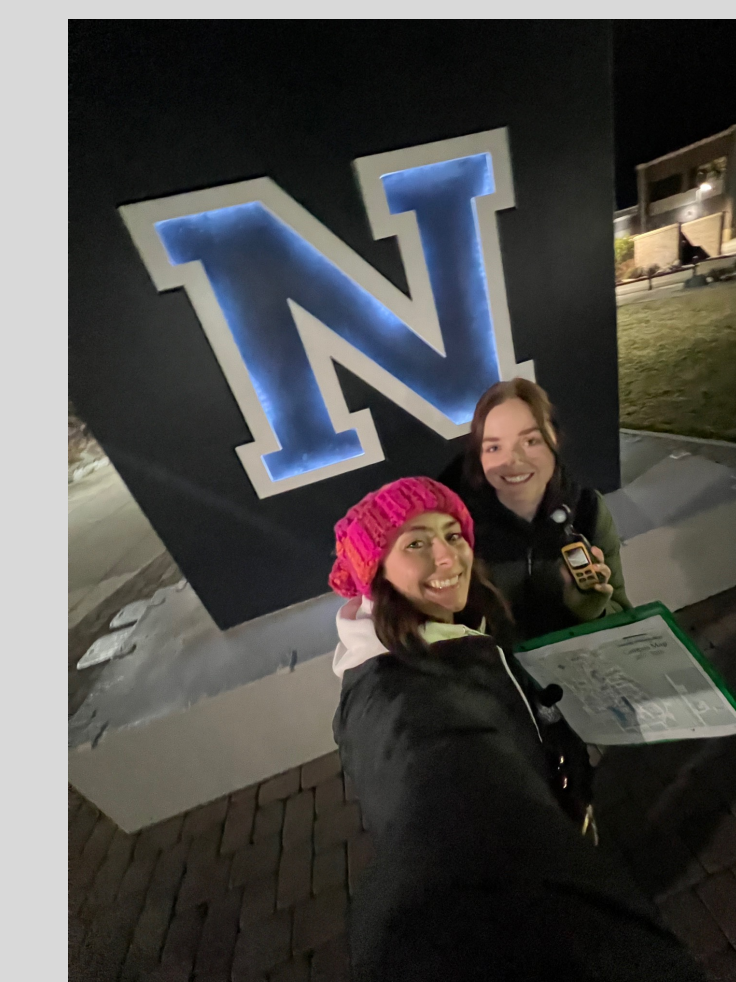
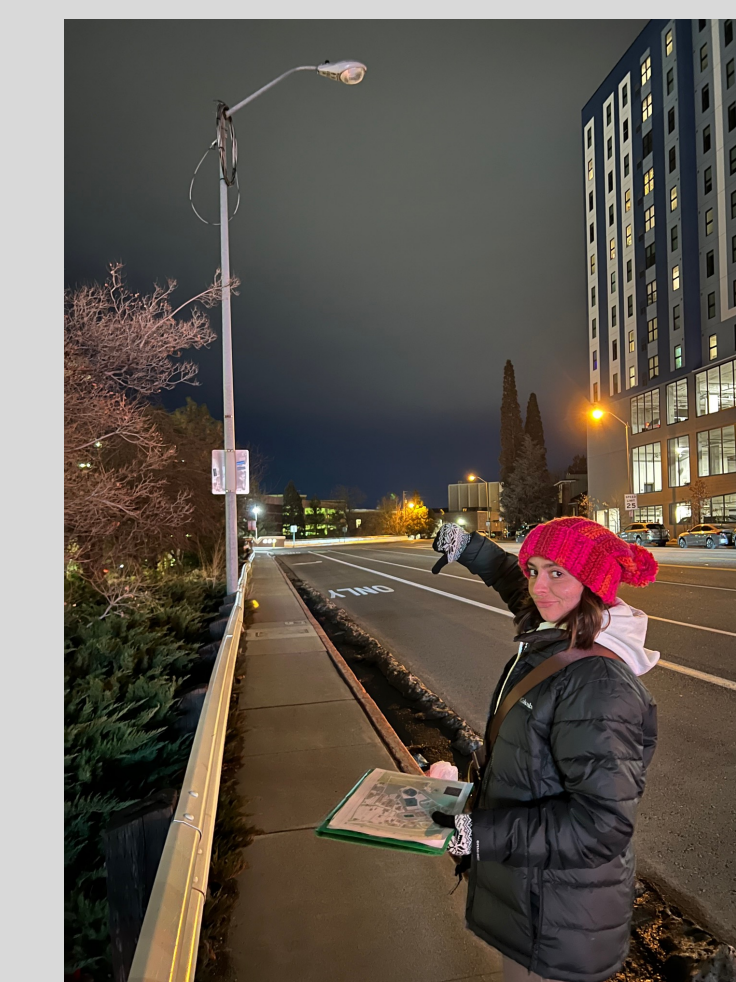


Map Editor



Data Collection

Since there was not an existing data set with light data around campus, we decided to collect our own light data. We did this by using light meters which measure lux (lumens per square meter) and recording the readings on a map of campus.



Kathleen and Anna's Data Collection – thumbs down to non-working lights

Future Work

Our future work includes developing an iOS version of *Ur Next Route*, adding the ability to route through buildings, and fun animations and color variations which would change due to holidays or weather. These will require additional data, so they were unfortunately not within the scope of this course.

Conclusion

By combining student and faculty recommended features, and our hand collected data, we have been able to create a very simple and user-friendly mobile application that will increase safety and comfort on campus!

This project was developed in Spring 2024 as part of the course CS 426 Senior Projects in Computer Science