

SCOOT

Andrea Donati, Alessandra Garcia, Ryan Gueck, Gustavo Perez, Fernando Mota, Divya Singh

Meet the Team

- **Andrea Donati:** Computer Science major who has worked for a year and a half for J.B. Hunt working on Application and Mobile Application Development. Responsible for developing the software requirements and researching related work. Will be responsible for the design and development of the front end of the mobile application.
- **Gustavo Perez:** A current senior in the department of Computer Science and Engineering at the University of Arkansas. He is majoring in Computer Engineering. He has completed a summer internship at Centauri as a Technical Intern and carried out work on the physical implementation of a RISC-V RocketCore that will be placed on the SoC design currently in use by the company. Will be primarily focused on back end development of this application.
- **Fernando Mota:** Mota is a senior Computer Engineering major at the University of Arkansas. He has completed relevant courses, such as Software engineering and Database management and has done outside projects. This student was responsible for researching some of the API requirements that are needed to complete this project and helped with completing group assignments. He will be helping with the back-end development and any other areas that may need help.
- **Alessandra Garcia:** Garcia is a senior Computer Science major at the University of Arkansas. She has completed relevant courses, such as Software Engineering. She has interned for J.B. Hunt for a few months, working on Mobile App Development. Will be responsible for the design and development of the front end of the mobile application.
- **Ryan Gueck:** Gueck is a senior Computer Engineering major at the University of Arkansas. He has completed relevant courses such as Software Engineering and Database Management. He has been an intern with Centene Corporation for a year now, working on the asset management team as a software developer. This student will be helping with the necessary front-end development required for completion, as well as monitoring existing bugs.
- **Divya Singh - Singh** is a senior Computer Science major at the University of Arkansas. He has completed relevant courses, such as Software Engineering, among others. He has also interned for J.B. Hunt like some of his other teammates for the last two summers. This student was responsible for market research on other services and companies involved with this app, as well as its API requirements as his peers did. Moving forward they will be responsible for working on the back end needs for the app, and any other areas that might need help.

Objective

- Application that collects data across multiple scooter checkout services
- Presents user with a map with locations of all scooters in the area
- Scooter objects can be modified to reflect poor physical condition or low battery through user submitted reports
- Redirects to target app

Problem

- Having to use different apps
- Focusing on just one company
- Scooters having issues

- Simplify the process of finding nearby scooters
- Expand past one company

Scooter Map

- Helps user locate scooters in their area
- Chargers and Riders
 - Riders are able to ride on scooters
 - Chargers are able to charge scooters
- Chargers have specific authorization from the corresponding e-scooter companies
- A rider and charger are interchangeable
- Only works in major cities
 - Does not function in Fayetteville

Schedule

Tasks	Dates
Research react-native and mobile app setup	12/30-1/11
Setup and install tools Setup GitHub repository	1/11-1/13
Basic react app skeleton implementation	1/14-1/22
Develop frontend implementation Develop backend implementation	1/25-3/5
Create READ ME files Make logo for app Create icons for app	3/8-3/19
Extensive testing	3/22-4/2
Fix bugs and any styling issues Document and complete app	4/5-4/16 4/19-4/29

Key Concepts: APIs & Endpoints

- API: Application Programming Interface
 - Map API
 - E-scooter APIs
- Endpoints are a communication channel represented as a URL of a server or a service
 - Use endpoints to obtain data from the e-scooter companies

Software Requirements & Design Goals

- Open the application to a map
- Be able to see all the scooters that are available in the vicinity
- Have the user click on the scooters that are nearby and see its charge and price for a ride as well as the ability to book a ride
- If the user decides to book a ride the user will then be navigated to the e-scooter's company app
- The user will have a username and password
- The user will be able to filter by e-scooter company

Architecture Overview

- Will be created using React Native to allow for distribution across multiple OS's
- Collection of multiple API's across scooter platforms
- Data overlaid on dynamic map using Google Maps API

Potential Risk

- Bugs post launch
 - Allow for user feedback to report issues with the application
- Security
 - App will not have access to payment information or third-party application login information
- Limited API access
 - Let users know application currently can't display map information for a service and give them option to redirect to that application