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evRoute is an electric vehicle application that provides detailed directions to a destination of your choosing. Start, middle, and end points are provided with projected necessary charging points along the way. These stopping points are based on your electric vehicle model.

Concept

As an Electric Vehicle Owner,

I want to know where charging stations are located prior to my trips because charging stations are not as prevalent as gas stations (yet).





Concept & Motivation

While electric vehicles are becoming more and more available, the infrastructure to support this new type of vehicles is not matching its projection.

- Various government agencies are working on these issues
 - Examples:
 - US Dept of Energy's [Alternative Fuels Data Center](#)
 - [National Renewable Energy Lab](#)
 - CDOT Dept of Innovative Mobility and the Colorado Energy Office's [NEVI Program](#)
 - However, the private companies that have the most market share for providing Driving Directions have yet to incorporate this feature, but a couple are starting to work on it, i.e MapBox & Tom-Tom.
- This project aims to help long distance EV travelers gain confidence that they will not be stuck on the side of the road with a depleted battery.

Features

Administration

- User Management
 - Lock/Unlock Users
 - Delete Users
- EV Management
 - Import new EVs from NREL's Alternative Fuel Vehicles API

User

- Create Account
- Login/Logout
- Change Password
- Add & Remove EV's to their Fleet
- Add & Remove Trips
- View EV Charging Stations along their route
- Specify a default starting address/location



Technologies & 3rd Party APIs

[HTML](#)

[CSS](#)

[JavaScript](#)

[GitHub](#)

[Node.js](#)

[Express.js](#)

[MySQL](#)

[Sequelize](#)

[Bootstrap v5.2.1](#)

[MapBox Directions](#)

[NREL Alternative Fuel Stations](#)

[NREL Alternative Fuel Vehicles](#)

[Syntactically Awesome Style Sheets*](#)

[Heroku](#)

[MapBox GL JS](#)

[Express Handlebars](#)

[Node-fetch](#)

Process

Breakdown of tasks and roles:

Drew - Dashboard, Styling

Dan - Change Password, API, Database, Login, Map, Add Trip, Admin, Mysql, Express, & READ.me.

Andrew - Presentation

Challenges:

Contacted NREL since the Vehicle API didn't return a full URL for the photos and the docs didn't fill in the gap.

Demo

<https://dpk5e7-evroute.herokuapp.com/>



Future Enhancements

- Allow the user to reset a forgotten password.
- Force a user to change their password on their next login.
- Automatically lock out a user on a set number of failed login attempts.
- Add paging to the administration tables.

Links

GitHub Repo: <https://github.com/dpk5e7/evRoute>

Heroku Hosted URL: <https://dpk5e7-evroute.herokuapp.com/>