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EV Charger Mobile App

**Company Handover**

# Overview, Goals, and Objectives

The EV mobile app project aims to create a mobile app that allows users to find the nearest EV charger location.

## Aims for Trimester

The goals for T1 were:

* Set up the framework, development processes, DevOps, and an early MVP, for the mobile app platform
* To perform initial research and create an early MVP for the EV location recommendation engine

Project Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Student ID** | **Full Name** | **JuniorSenior** | **UG/PG** | **Team Group/Role** | **Project/Team Lead?** |
| **220544661** | **Glenn Richmond** | **Senior** | **Postgrad** | **Project Leader** | **Y** |
| **222084667** | **Mohamed Dallol** | **Junior** | **Postgrad** | **Assistant Project Leader** | **Y** |
| **216095588** | **Haley Holloway** | **Senior** | **Undergrad** | **Data Science & Engineering** | **Y** |
| 220267679 | Billie Jack Hancock | Junior | Undergrad | Data Science & Engineering |  |
| 219213881 | Matthew Robert Iredale | Junior | Undergrad | Data Science & Engineering |  |
| 221045868 | Rahul Kumar | Senior | Postgrad | Data Science & Engineering |  |
| 221430794 | Mei Liu | Junior | Postgrad | Data Science & Engineering |  |
| 218637524 | Disha Mann | Senior | Undergrad | Data Science & Engineering |  |
| 219605515 | Truong Giang Nguyen | Junior | PostGrad | Data Science & Engineering |  |
| 221459705 | Nidhi Tapankumar Patel | Junior | Postgrad | Data Science & Engineering |  |
| 600022742 | Sarah Bullen | Senior | Postgrad | Data Science & Engineering |  |
| **219285112** | **Sarishti Sarishti** | **Senior** | **Undergrad** | **Design** | **Y** |
| 221212001 | Richard Adams | Junior | Undergrad | Design |  |
| 220252511 | Yuvraj Kapoor | Junior | Undergrad | Design |  |
| 220421563 | Nihaal Sachdev | Junior | Undergrad | Design |  |
| 218292859 | Samuel James Spice | Junior | Undergrad | Design |  |
| **219020285** | **Harleen Kaur** | **Senior** | **Undergrad** | **Web & App Development** | **Y** |
| 222057256 | Kussay Al-Zubaidi | Junior | PostGrad | Web & App Development |  |
| 219051815 | Muhammad Ahmed Arif | Junior | Postgrad | Web & App Development |  |
| 220462328 | Chenyu Kong | Junior | Undergrad | Web & App Development |  |
| 219179817 | Hamish Glover | Junior | Undergrad | Web & App Development |  |
| 218062706 | Muhammad Rehan Qureshi | Junior | Undergrad | Web & App Development |  |
| 219314678 | Abhiishekh Avula | Senior | Undergrad | Web & App Development |  |

The goal of this project is to be able to design and implement a mobile app (Android and iOS) to help consumers identify a nearby charging location. While there are existing apps on the market that offer this functionality (i.e., Chargefox), we believe that we can offer an app that differentiates itself from those apps by designing features that add value beyond just finding the charging station.

A few examples of what the app may offer in addition to the core function of locating an EV charger location include:

* Providing additional information and filtering of stations based on type (EV vs hydrogen, for example), information on the source of the power (direct solar, grid powered, gas, diesel etc)
* Providing a full journey planner for longer trips that optimizes for reducing charge time, cost, and environmental impact along the route
* Ability to incorporate your usage data with current fuel prices, cost of maintenance etc and provide an indication of real savings for running the vehicle
* Note that Chargefox does also offer the ability to pay for charging via the app, so this may be something to consider in the architecture of the platform.

# Project Status

So far, we’ve been able to achieve the following for the mobile app:

* To create branding and user experience for the mobile app
* Selection of the React Native framework for development
* Creation of a limited MVP mobile (navigation and map components working)
* Creation of devops pipelines to automatically build and deploy the mobile app
* Simple Mobile app deployed to Google play store

## Next steps for the project

The next steps for this project are to continue to enhance the mobile app and add the following:

* Add real EV location display to the Google map along with the ability to filter those EV chargers (requires new APIs (application programming interfaces) from the data science team).
* Add improved user interface to the layout and form submission.
* Improve the branding of the app to incorporate the Evoleon app branding.
* Add registered user functionality to the app such as the ability to log and track my EV charging usage.

The key here will be to work with the data science team to create APIs to support the above functionality.

## Location of project resources

* [Evoleon App play store listing](https://play.google.com/console/u/1/developers/8755112969725174772/app/4972461749874318628/app-dashboard?timespan=thirtyDays) (use [evoleonapp@gmail.com](mailto:evoleonapp@gmail.com) to access as admin)
* [Github Repository](https://github.com/grdeakin/evoleonapp)
* [Github Build Pipelines](https://github.com/grdeakin/evoleonapp/actions)
* [Evoleon Expo Project](https://expo.dev/accounts/chamelonorg/projects/evoleon) (React Native Build Pipeline & submission to play store)
* [Trello Board](https://trello.com/b/wA8EhPD2/mobile-app-development)

For the gmail access, use the password “AdV4MjryMY94mRaz”. You may require 2FA for this, which a number of the junior students have. In addition, the following deakin users have admin access to the play store listing:

Graphical user interface, application

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# Running the Current App

In order to run the current app,  clone the current repository at:

<https://github.com/grdeakin/evoleonapp>

using the command:

[git@github.com:grdeakin/evoleonapp.git](mailto:git@github.com:grdeakin/evoleonapp.git)

Install the expo framework and CLI tools using:

<https://docs.expo.dev/>

Once you have done this, navigate to the source code directory and run:

npm install

This will install all of the required modules. Once you’ve done this, you can run the app using the expo framework:

expo start

This will then allow you to open the app in your local browser or by running a local android emulator. This is a video that shows how this is done:

<https://youtu.be/HZBaVG00e7A>