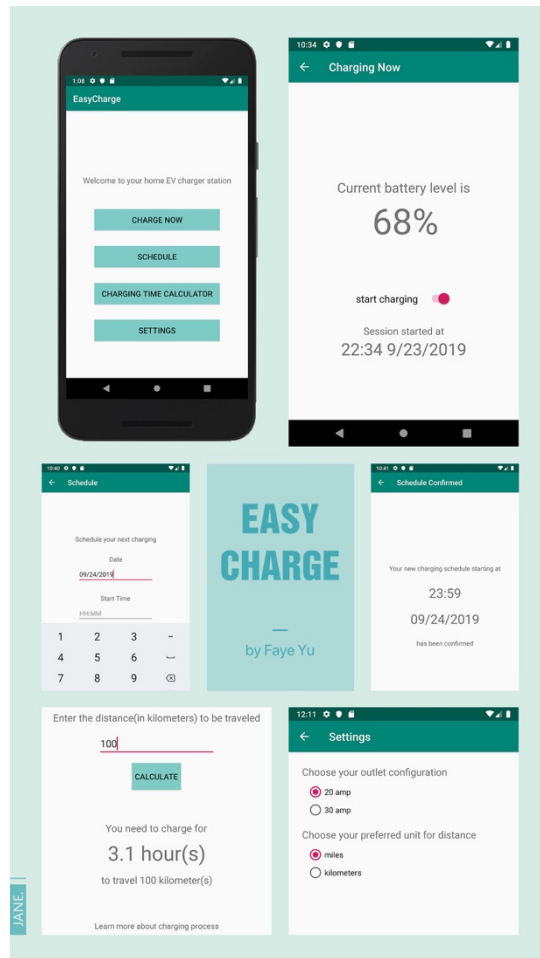


EasyCharge

Your Digital Companion App for Your Home Charging Station
Presented by Faye Yu

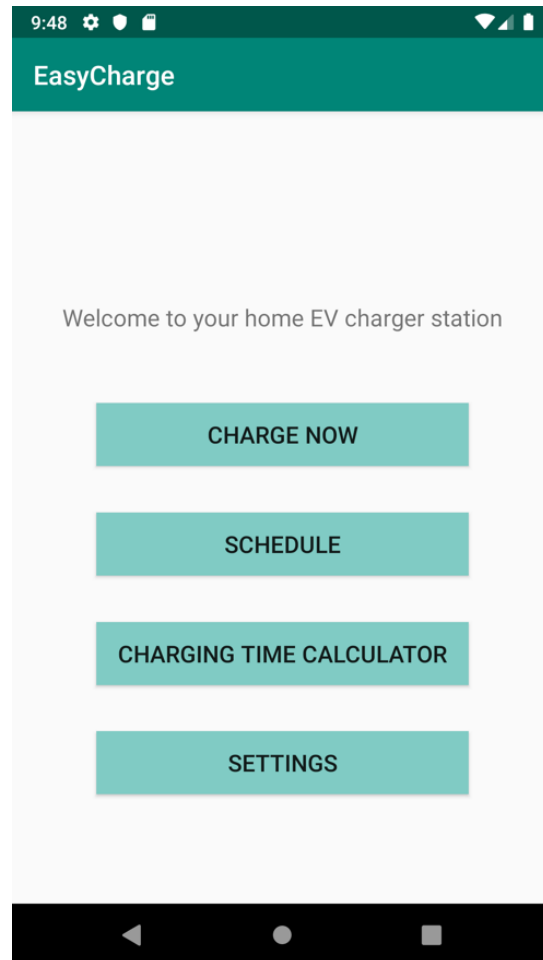
Demo: <https://youtu.be/C9KXpVO6gNc>

Github: <https://github.com/cs160-berkeley/prog01-fa19-mengfy0718>



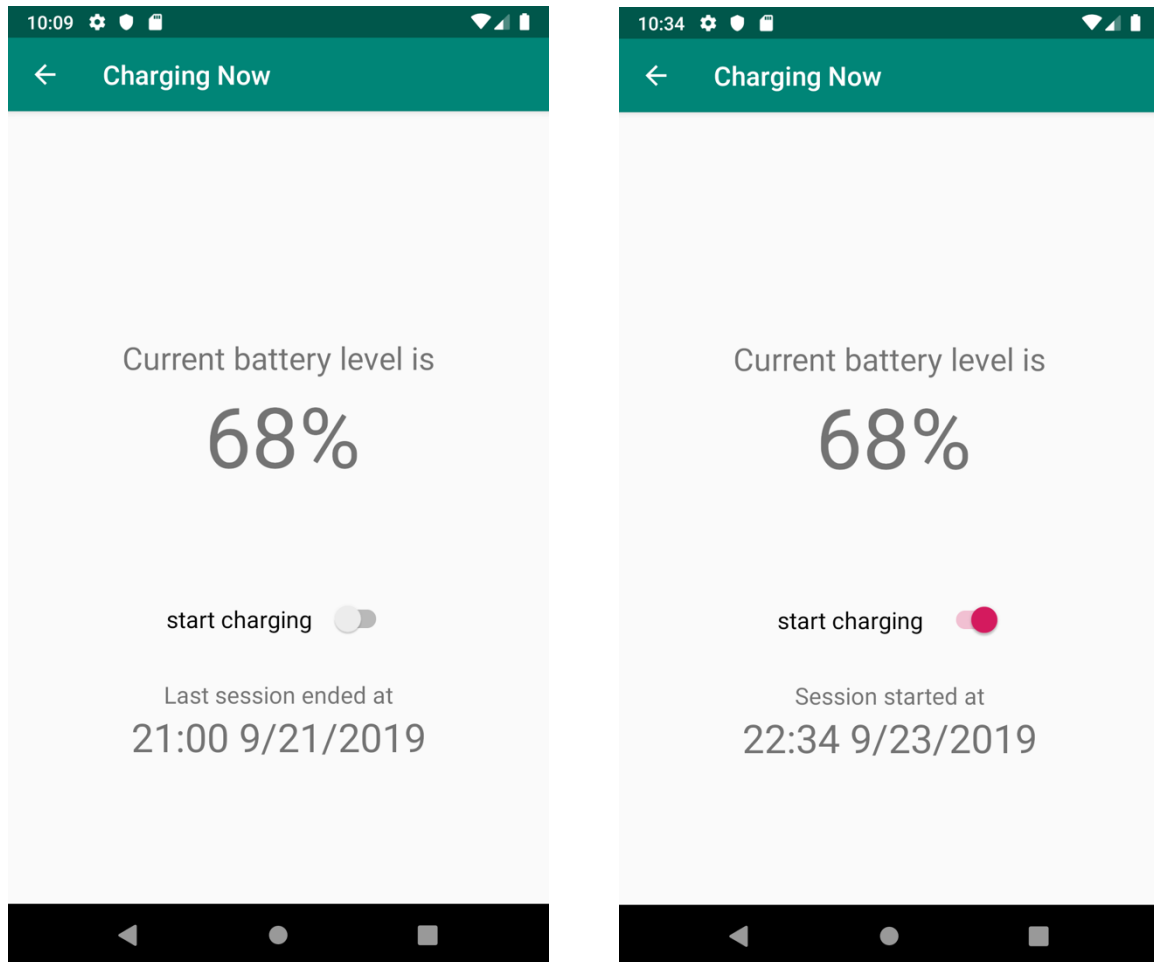
EasyCharge is an Android application for convenient and efficient home electric vehicle charging management. With flexible settings, it enables users to monitor the charging process and schedule for future charging. Here will introduce all features and functionalities supported by EasyCharge.

Home Screen



When users first enter EasyCharge, the home page with the main menu will display on the screen. There are four buttons which will redirect users to corresponding screens after users click on them. This is also the screen where users could return from other screens.

Charging Screen



Once clicking on the “Charging Now” button in the main screen, users will enter the screen that monitor the charging process of the EV battery. On the top, it will display the current battery level. There is a switch in the middle that users could use to turn on/off the charging process. If it is not charging, it will display the end time of the last charging session on the bottom. Once the charging is turned on, it will record and display the start time of the current charging session, for users’ reference.

Schedule Screen

The image displays three sequential screenshots of a mobile application interface for scheduling a charging session.

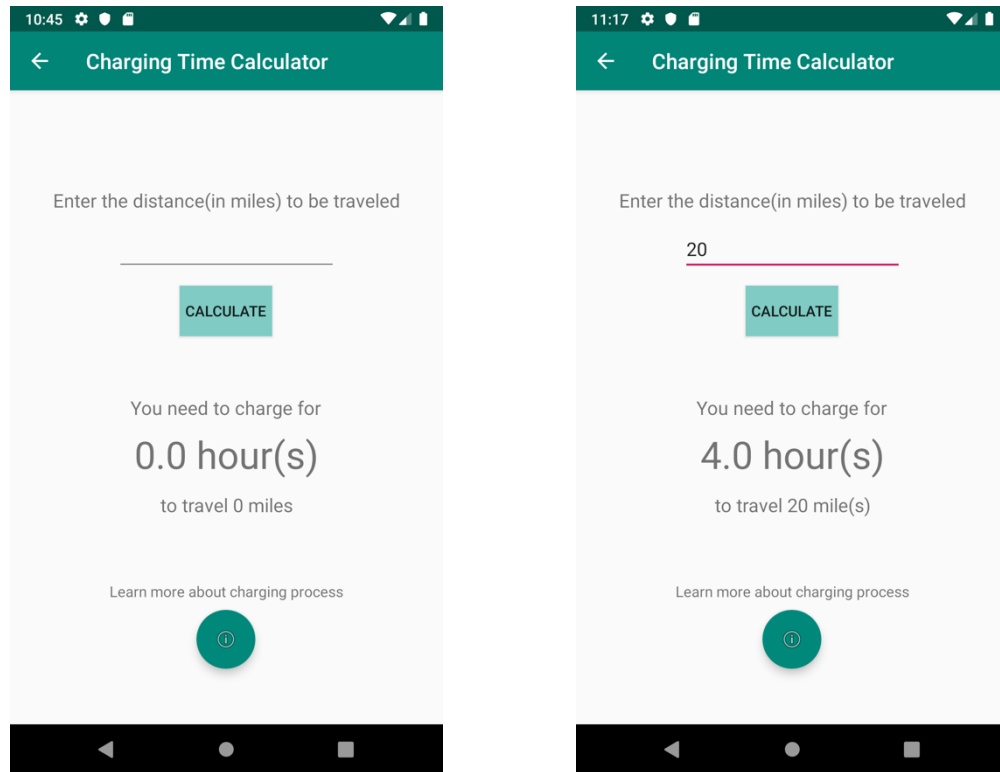
Screenshot 1 (Left): The screen is titled "Schedule" with a back arrow. It prompts the user to "Schedule your next charging". There are two input fields: "Date" with a placeholder "MM/DD/YYYY" and "Start Time" with a placeholder "HH:MM". A teal "CONFIRM" button is at the bottom.

Screenshot 2 (Middle): The screen is titled "Schedule" with a back arrow. The "Date" field now contains "09/24/2019" and the "Start Time" field contains "23:59". A numeric keypad is overlaid on the screen, showing digits 1-9, 0, a decimal point, a minus sign, and a backspace icon. A teal arrow button is at the bottom right of the keypad.

Screenshot 3 (Right): The screen is titled "Schedule Confirmed" with a back arrow. It displays the message "Your new charging schedule starting at" followed by "23:59" and "09/24/2019" in large text. Below this, it says "has been confirmed".

Once clicking on the “Schedule” button in the main screen, users will enter the screen for scheduling of charging. There are two text field entries that prompt users to enter the date and time in the correct format. After users click the “Confirm” button, the confirmation page of the new schedule will display on the screen.

Charging Time Calculator



After users click on the “Charging Time Calculator” button in the main screen, it will navigate to a page where users could convert the distance to travel to charging time. There is a number field for entering a distance to be traveled. Once users click on the “Calculate” button, the text view below will display the time to charge enough battery for that distance.

There is also a round button on the bottom of the page, which will redirect to an external website that includes more information about how to charge the vehicle and how to calculate the charging time. By clicking on the return button of the browser (Chrome by default), users could return to the calculator screen of our app.



Settings Screen

Finally, users could click on the “Settings” button in the main screen to adjust settings using radio buttons. For outlet configuration, users could choose between 20 amps and 30 amps. For the unit of our calculator, they could choose between miles and kilometers. Clicking on the “Apply” button will save and apply the selected settings, which will mainly affect the result displayed on the calculator screen. The default settings are 20 amp and miles, just as shown in the previous section. Additional screenshots below demonstrate different results from the calculator under combinations of different settings.

