

On the Go: An Android App to Enhance Daily Travels

Team JTMAD: Jette Cantiller, Travis Cheng, Mairtin Steinkamp, Andrew Doan, Dodd Liang

Advisers: Professors Prem Devanbu, Dipak Ghosal

UC DAVIS
COMPUTER SCIENCE



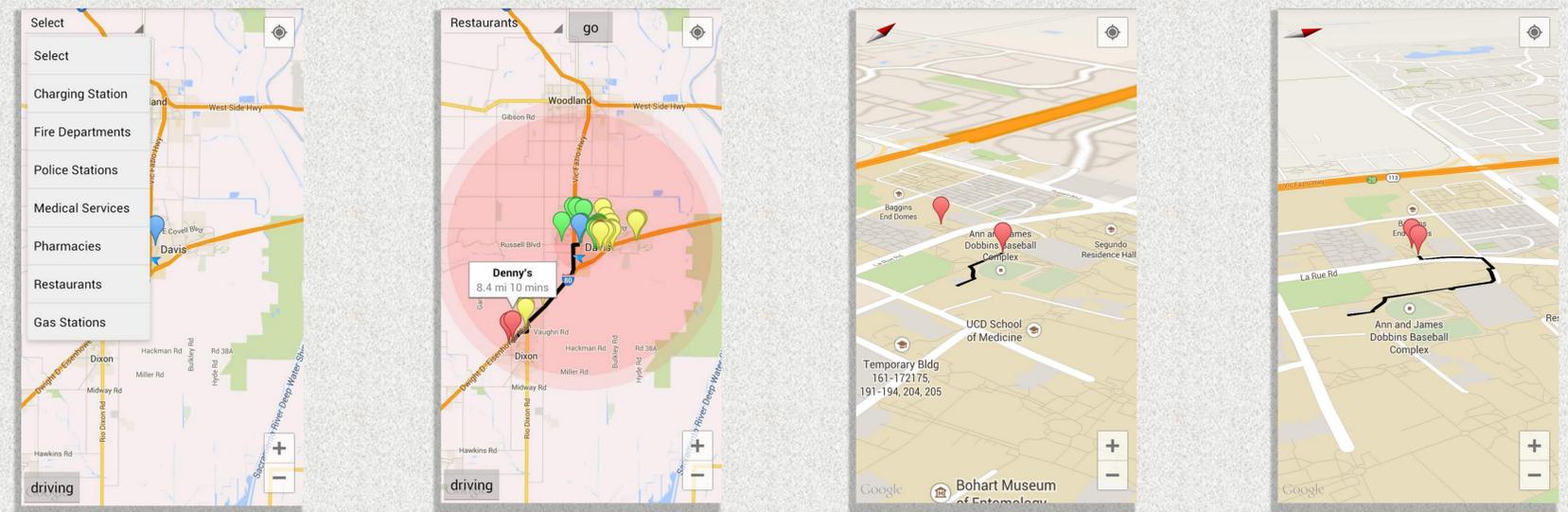
Project Focus

Reachability in daily travel has not only been ignored in modern technology, but also holds no tangible meaning. The project On the Go, an Android application which extends the functionality of Google maps to display reachable destinations within a bounded time, focuses on visualizing reachability in new ways. Its ultimate focus is to seamlessly integrate the surge of electric cars in the future market using familiar software and to educate the public about the capabilities and limitations of our traveling habits.

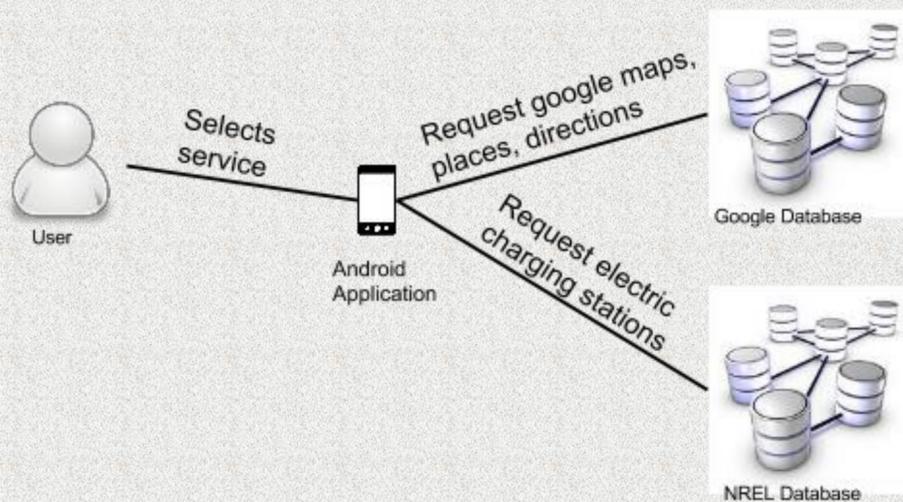
Functionality

- An android application that displays places of interest, in a given area based on travel times. This is done by utilizing GPS and Google services.
- Google directions is applied to all the markers in a given area to gain an accurate picture of where you can go.
- User can pick between emergency services (police, fire, medical), convenience (pharmacy, grocers, gas station), restaurants, bars, and electric charging stations services.
- User can pick between driving or walking speed searches.
- With the selection of a service, the map will be populated with colored markers, green for less than 5 minutes, yellow for less than 10 minutes, and red for less than 15 minutes.
- A contour is given with different color intensity for 5 minutes, 10 minutes, and 15 minute distances
- When markers are selected, the app will display an overhead route for the user.
- User can view a flyby of this route with the go button.

Android Application Screenshots



System Architecture



Used APIs

1. Google Places
2. Google Directions
3. Google Maps
4. NREL Charging Stations

Charging Station Use Case

- Our client believes that our application would be useful in electric cars, to allow users to find convenient charging stations.
- This is done in the same way as any other service selection. User picks a mode of transportation, and charging stations. Application will then populate map with charging station markers.

