

# ELECTROWAY: SMART ROUTING FOR ELECTRIC CAR CHARGING

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# PROBLEM DESCRIPTION

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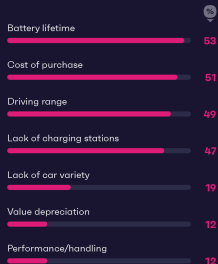
## The perceived advantages & disadvantages of owning an electric vehicle

% of internet users considering purchasing a car who think the following are the main advantages and disadvantages of owning an electric/hybrid vehicle

### Advantages



### Disadvantages



- multiple types of charging connectors
- car charge capacity
- charging station capacities
- wildly different car ranges

- **external factors**
  - temperature
  - speed
  - wind
  - rain
  - snow
- **use of internal systems** (i.e. the AC)

- Time to calculate the route
- Cost
- In the case of externalized map data, time and cost = number of point-to-point routing requests

# APPROACHES

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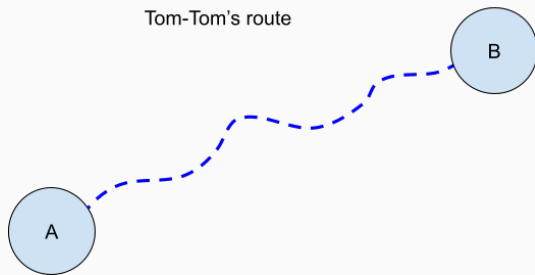


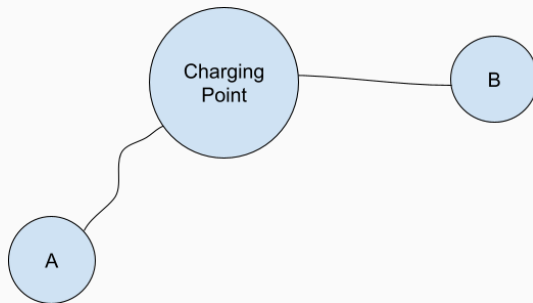
- The code is available on GitHub  
<https://github.com/QuothR/ElectroWay>

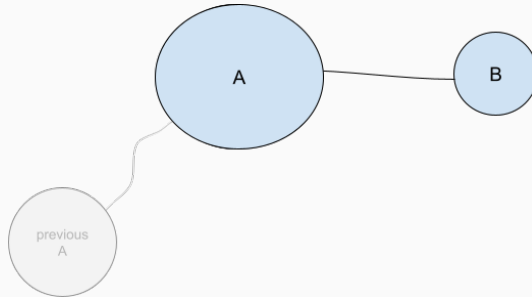
- car object
  - the current electric energy supply
  - maximum electric energy supply
  - charging speed
  - maximum speed of the vehicle
  - the amount of power consumed by auxiliary systems.
  - ...
- the starting point(**A**) and the ending point(**B**).
- collection of charging station objects
  - the location
  - charging points

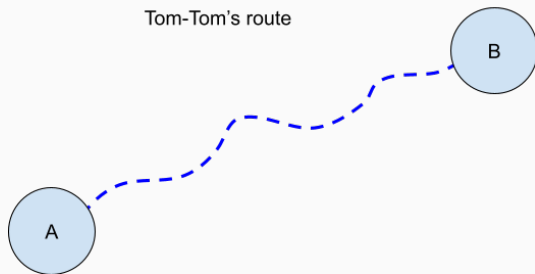
- Tom-Tom
- OpenWeather

- satisfactory solution
- feasible amount of time

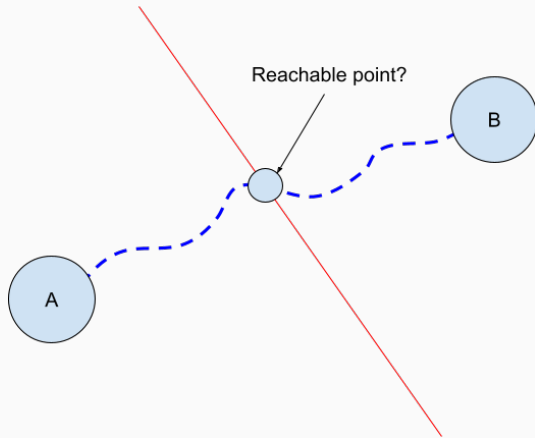


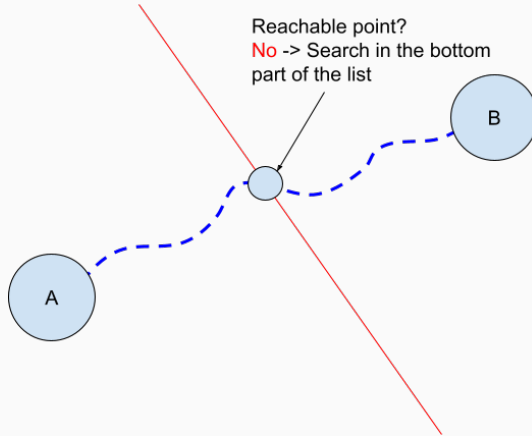


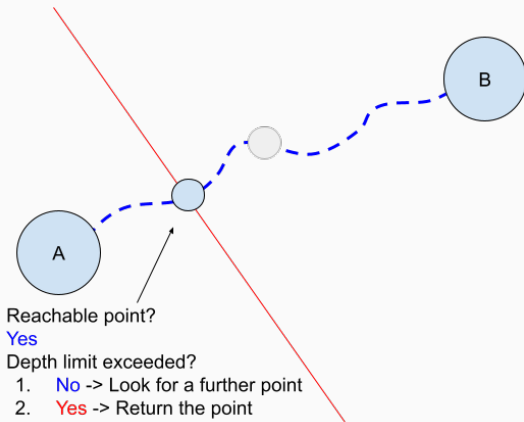


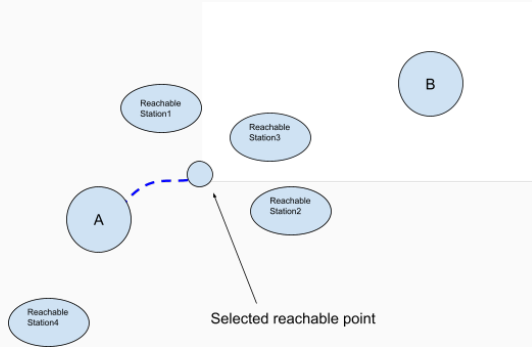


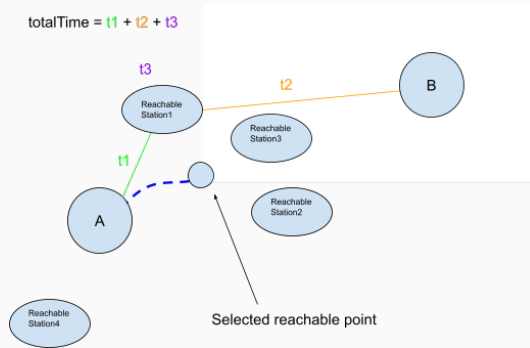


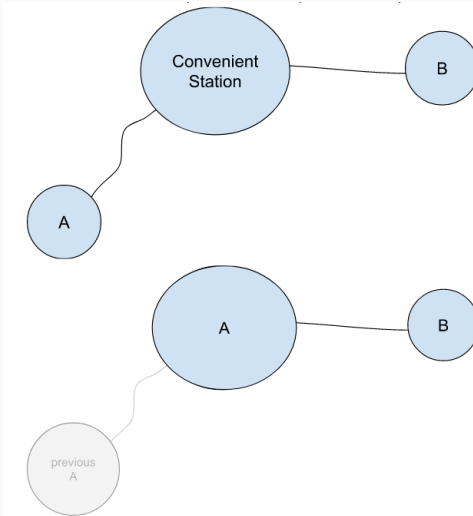












## FUTURE WORK

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- use of caching
- integrating the ElectroWay application with existing charging station networks



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