

How to use search route using google maps using google API

`https://www.google.com/maps/embed/v1/directions`

`?key=YOUR_API_KEY`

`&origin=Oslo+Norway`

`&destination=Telemark+Norway`

`&avoid=tolls|highways`

Api key for google maps

Key ----- AIzaSyBc0cUQDRYXLQpwiv3WdcjzbqiUm-NaJfI

Resources

<http://www.cptips.com/formula.htm>

<http://tourdevines.com.au/how-many-calories-does-cycling-burn/>

www.abs.gov.au/ausstats/abs@.nsf/mf/9208.0/

<https://www.drive.com.au/motor.../australian-cars-co2-villains-report-20130313-2g1oq>

<https://www.environment.gov.au/system/files/resources/5a169bfb-f417-4b00-9b70-6ba328ea8671/files/national-greenhouse-accounts-factors-july-2017.pdf>

Algorithm to calculate how many calories burnt

1. Retrieve the total time (t) of bike riding based on the route.
2. For calculating calories burned by riding bike following average data is required:
 - a. Average heart rate: 80 beats/ min
 - b. Average weight of human= 62kgs
 - c. Average Age= 21yrs.
3. These values will be used in the following formula for calculating calories burnt after particular finished route.

$$\text{Calories burn} = [(Age \times 0.2017) - (Weight \times 0.09036) + (Heart Rate \times 0.6309) - 55.0969] \times \text{Time (t)} / 4.184$$

Where: Age= 21yrs
Heart rate: 80 beats/ min
Weight = 62 kgs
Time= calculated through travelled route.

Algorithm for calculate emission per route

1. Calculating the Kilometres will be travelled by route.
2. As per data from studies shows average fuel consumption per 100 km is 10.6L and average emission by car in Australia is 190g/km
3. The total emission saved by using cycle is
Gases Not emitted= total km of route x 190.

Resource:

(<https://www.drive.com.au/motor.../australian-cars-co2-villains-report-20130313-2g1oq>)

Algorithm to calculate how much money can be saved

1. Calculate the total kilometers by the chosen route.
2. According the data from ATO, the average cost for car is 66c/km
3. The total saved money per route by not using cycle is

Money saved (cents)= total Km x 66

Resource

<https://www.ato.gov.au/Business/Income-and-deductions-for-business/Deductions/Motor-vehicle-expenses/Claiming-motor-vehicle-expenses-as-a-sole-trader/Cents-per-kilometre-method/>