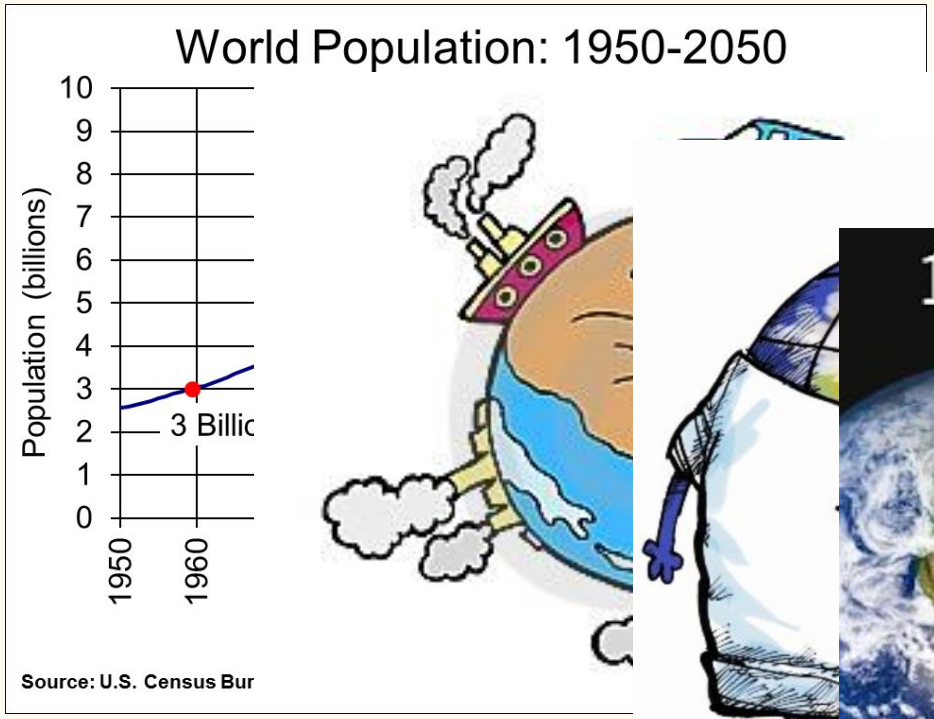
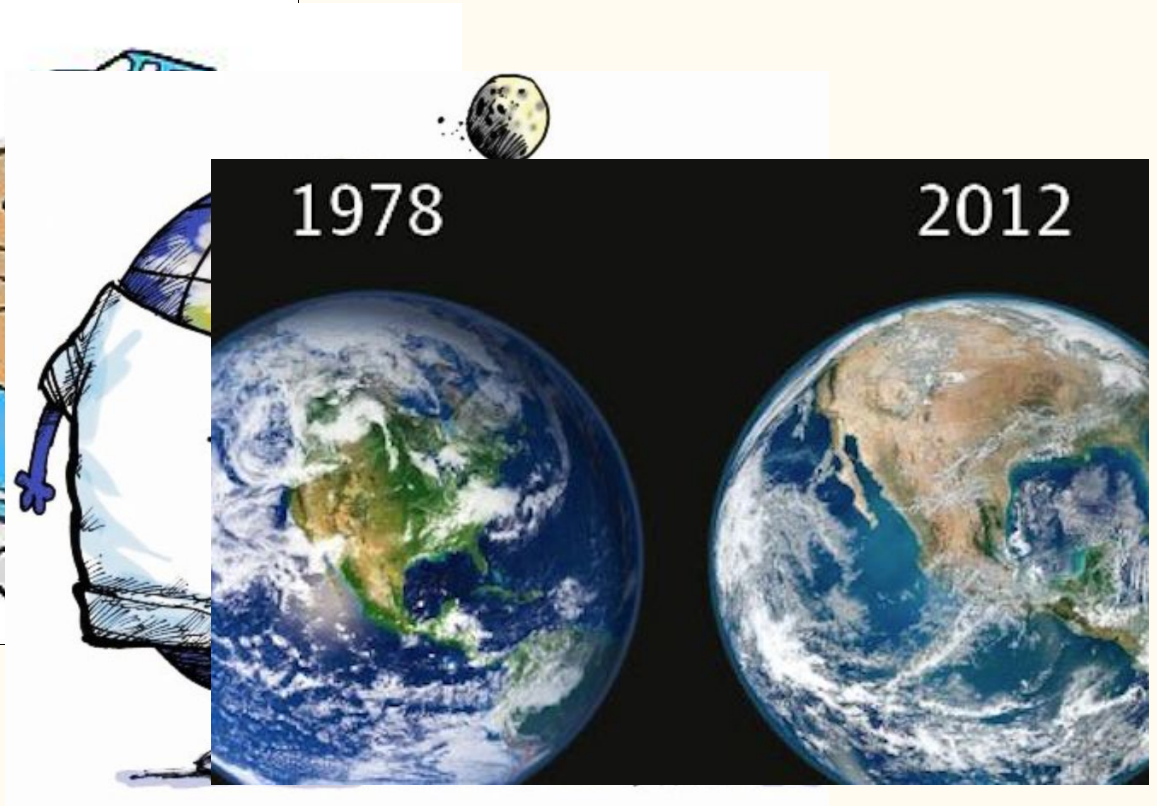
Eco-Friendly

Thomchelik Tunca

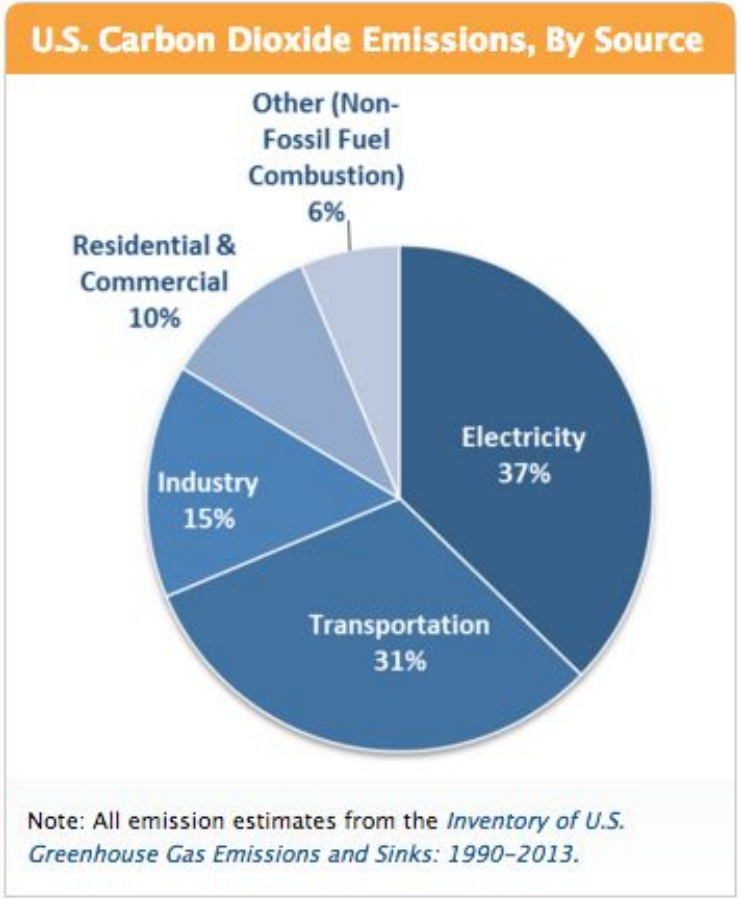
Global Epidemic





CO2 Emission Pollution

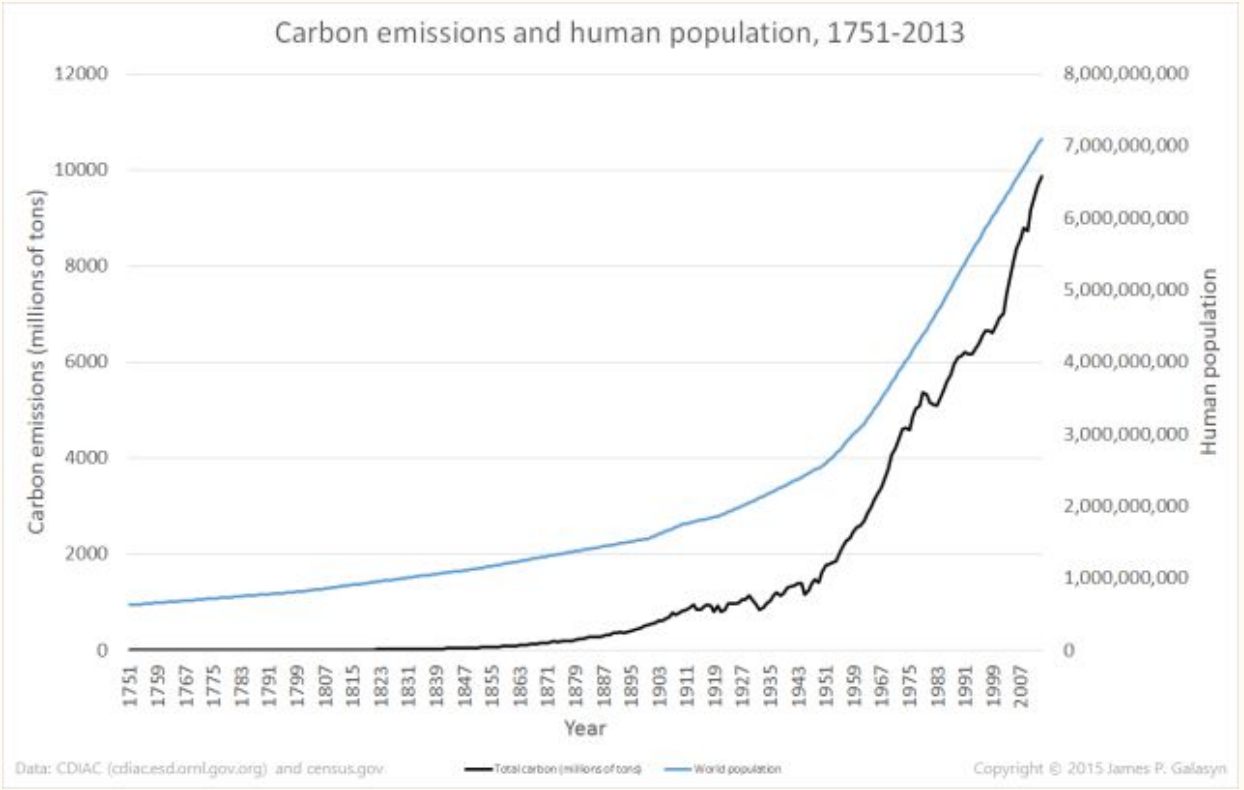
- CO2 emissions by vehicles QUADRUPLED in the last 70 years
- Average American = 19.8 metric tons CO2 emitted
- 4.7 metric tons from vehicles



Resource: US Environmental Protection Agency

CO2 Emission Pollution

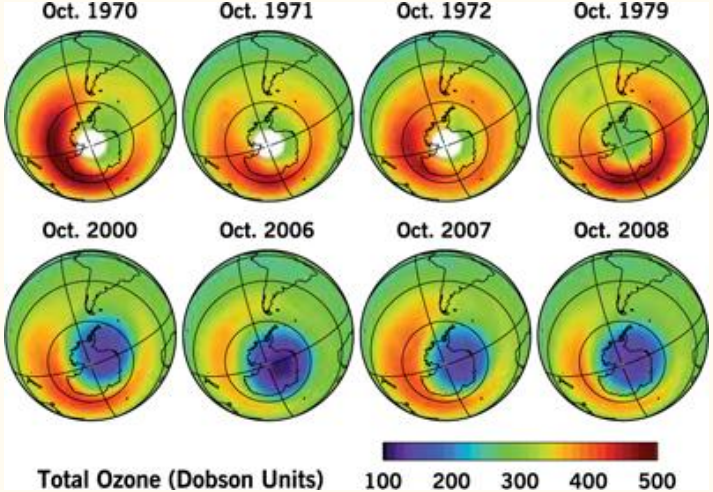
- Global temp increased by 0.31°C of total 0.85°C
- CO2 traps heat in atmosphere = Global Warming

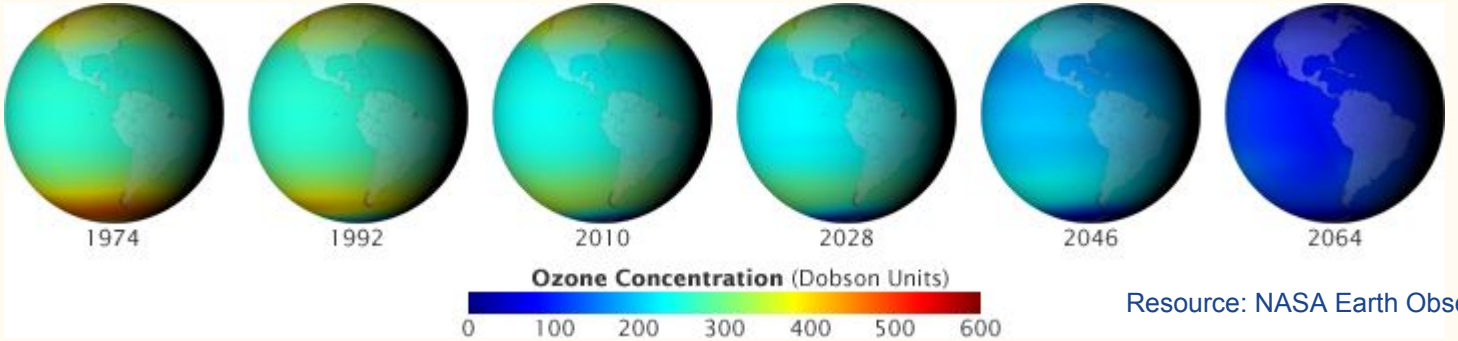


Resource: US Environmental Protection Agency

1. Side Effect - Ozone Layer Depletion

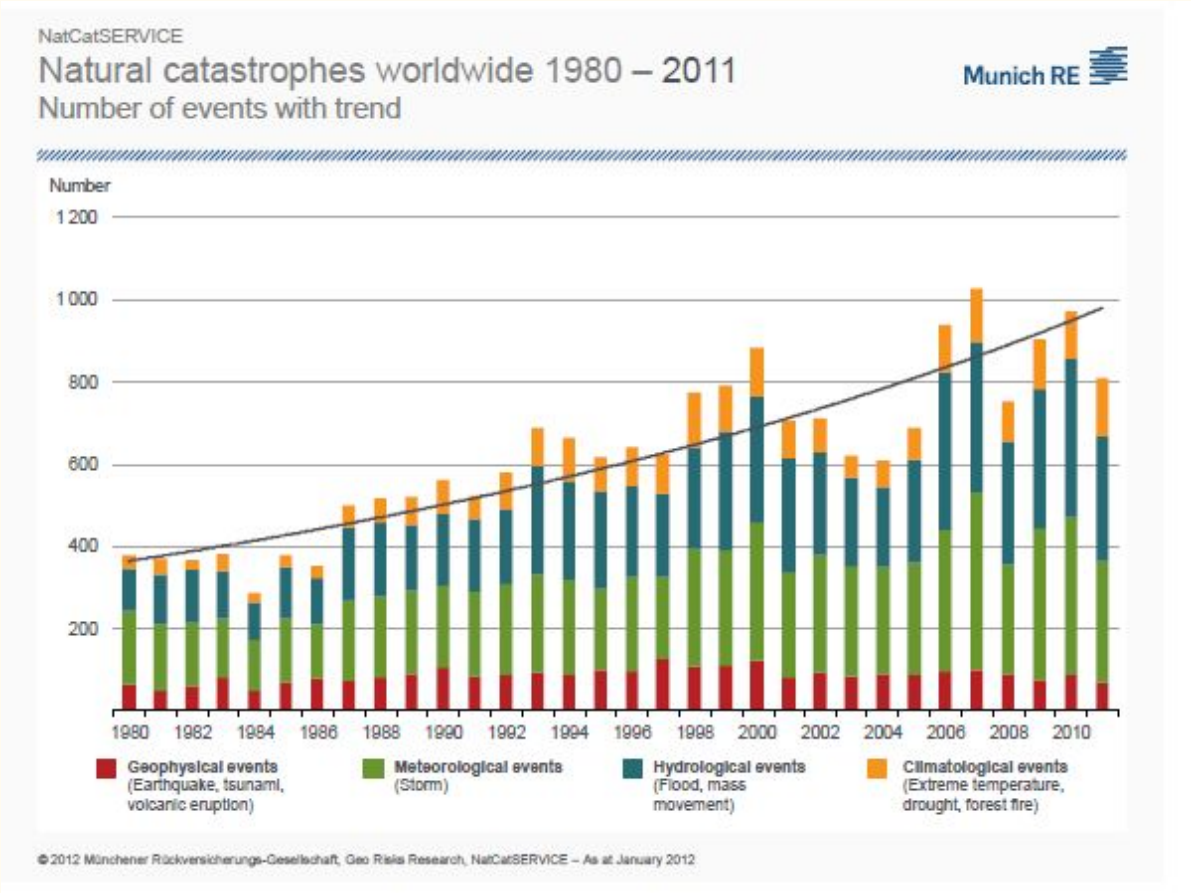
- Too much radiation
- Microscopic ecosystems (i.e. Plankton) will not thrive





Resource: NASA Earth Observatory

2. Side Effect - Severe Weather Events

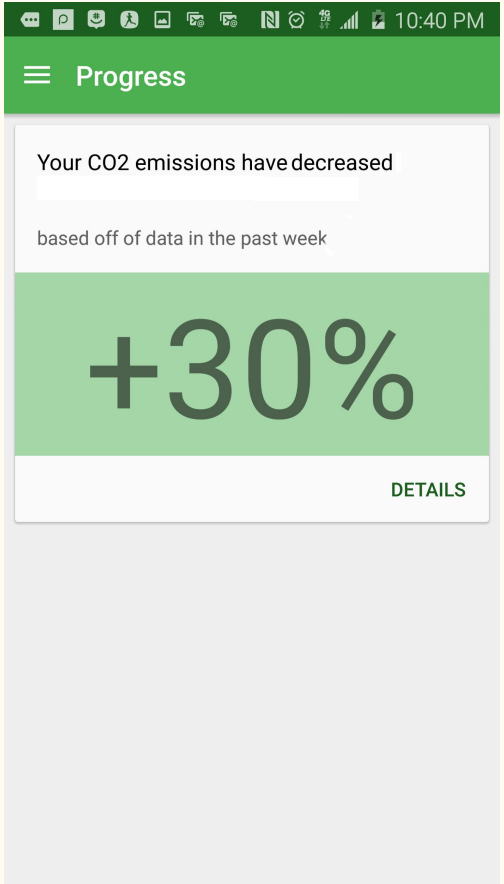


3. Side Effect - Oceanic Acidification/Acid Rain

- Rain water contains dissolved CO2 pollution
- Damages/kills crops, forests, and wildlife
- Pollutes drinking water sources

Solution

ECO
-FRIENDLY



- Android application that easily tracks a user's CO2 emission like calorie/step counter
- People are more conscious of their carbon footprint
- **Encourages user to reduce their own CO2 emissions via text and best route**

How It Works

- Finds distance traveled by a source of transportation

- Calculates total day's CO2 emission from all trips
- Keeps track of CO2 emission trips and encourages user to do better each day

Start Trip

Marker dropped =

Event

Store in ArrayList

Checks every 5 mins

ID end of trip

Compute trip length/time

Completed Trip

Determine what mode:
(1) Walk
(2) Bike
(3) Car
(4) Bus
(5) Metro
(Google JSON)

Compute CO2

Trip

(3) Car: Database

User Selection = make/model

(4) Bus = 2016 DC data

User Selection = shared riders

(5) Metro = 2016 DC data

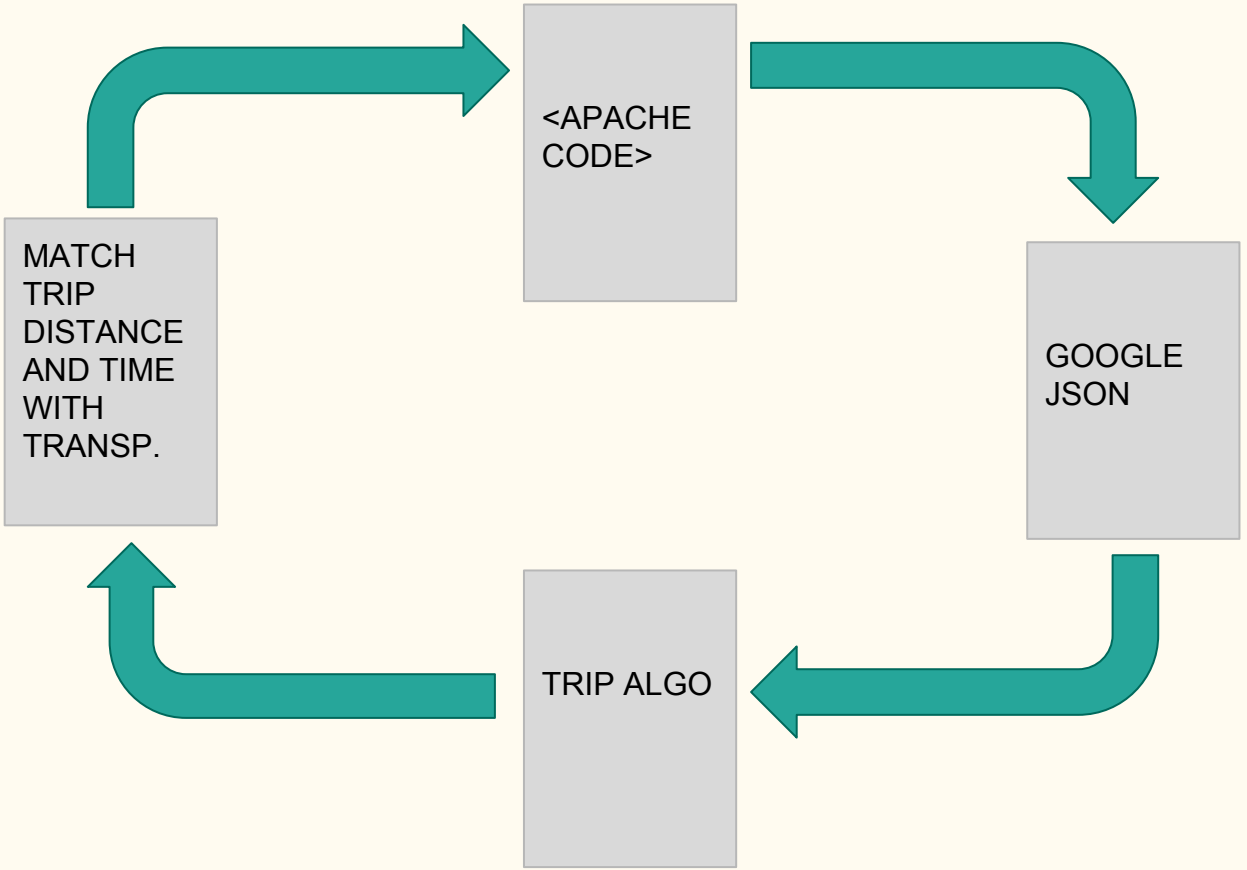
User Selection = shared riders

Store trip with associated CO2 emission in today's Event

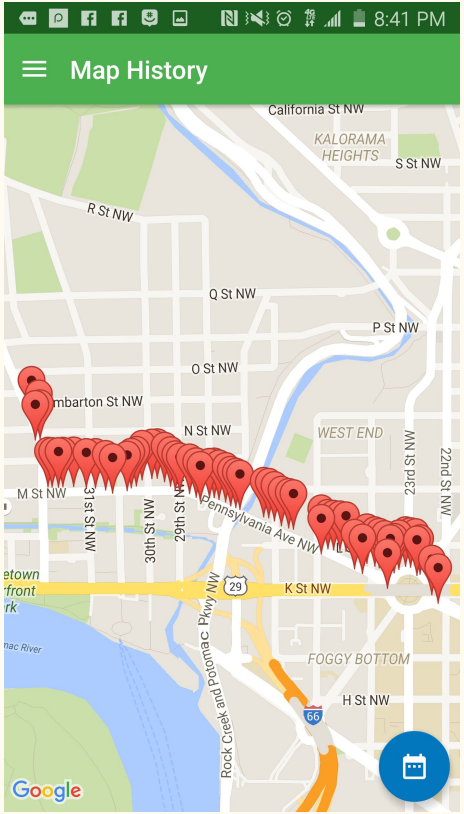
Date Event

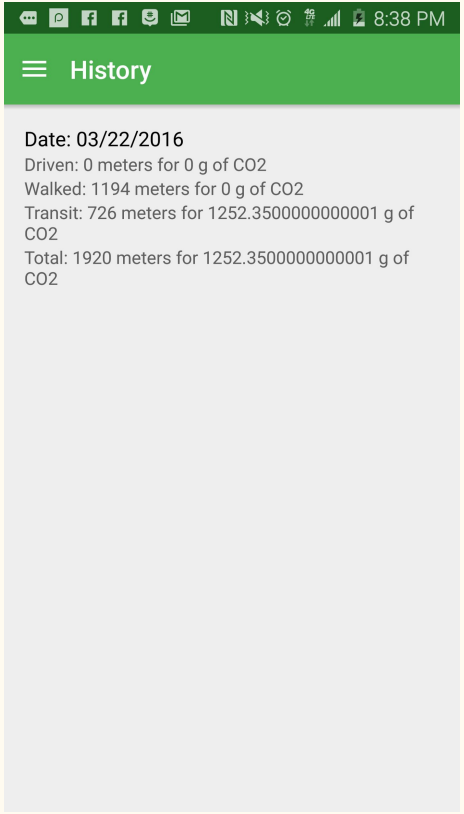
User begins moving

GOOGLE JSON ALGORITHM

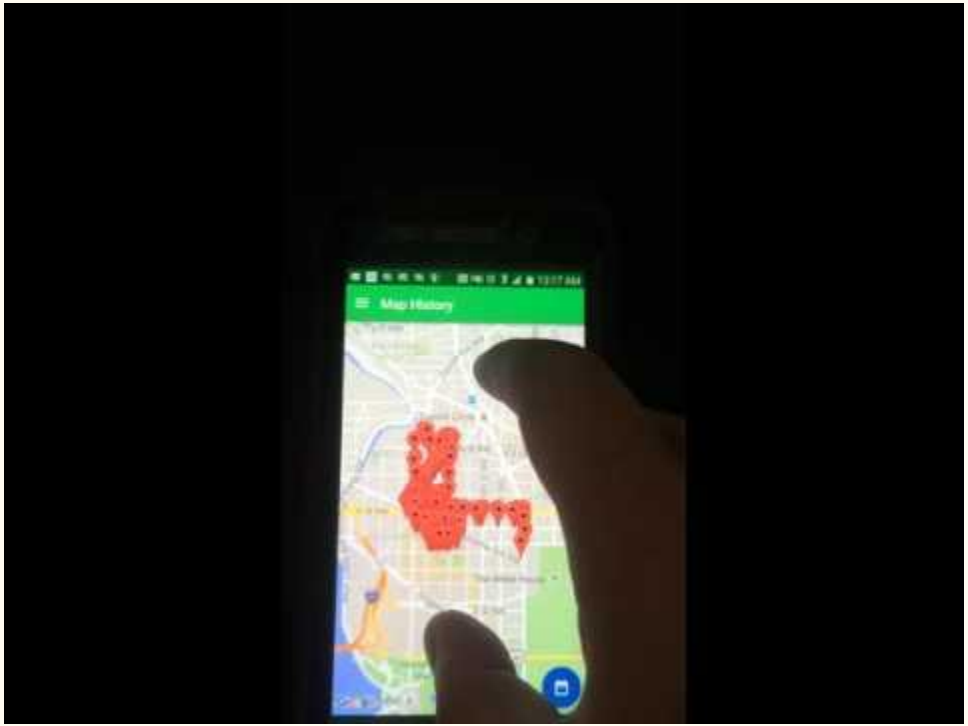


CO2 Tracker

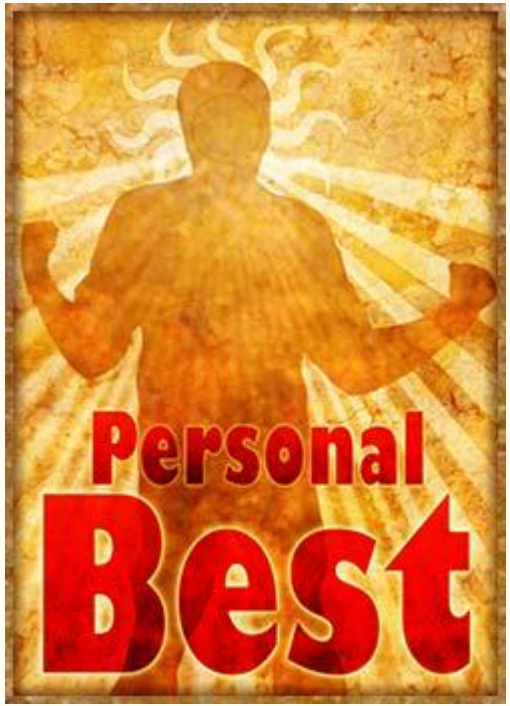

8:41 PM
Map History
California St NW
KALORAMA HEIGHTS
S St NW
R St NW
Q St NW
P St NW
O St NW
mbarton St NW
N St NW
WEST END
M St NW
31st St NW
30th St NW
29th St NW
Pennsylvania Ave NW
23rd St NW
22nd St NW
29
K St NW
Rock Creek and Potomac Pkwy NW
FOGGY BOTTOM
H St NW
66
Google


8:38 PM
History
Date: 03/22/2016
Driven: 0 meters for 0 g of CO2
Walked: 1194 meters for 0 g of CO2
Transit: 726 meters for 1252.3500000000001 g of CO2
Total: 1920 meters for 1252.3500000000001 g of CO2

ECO-FRIENDLY FEATURES



Encourage User to Lessen CO2



A Healthy Earth is a Happy Earth