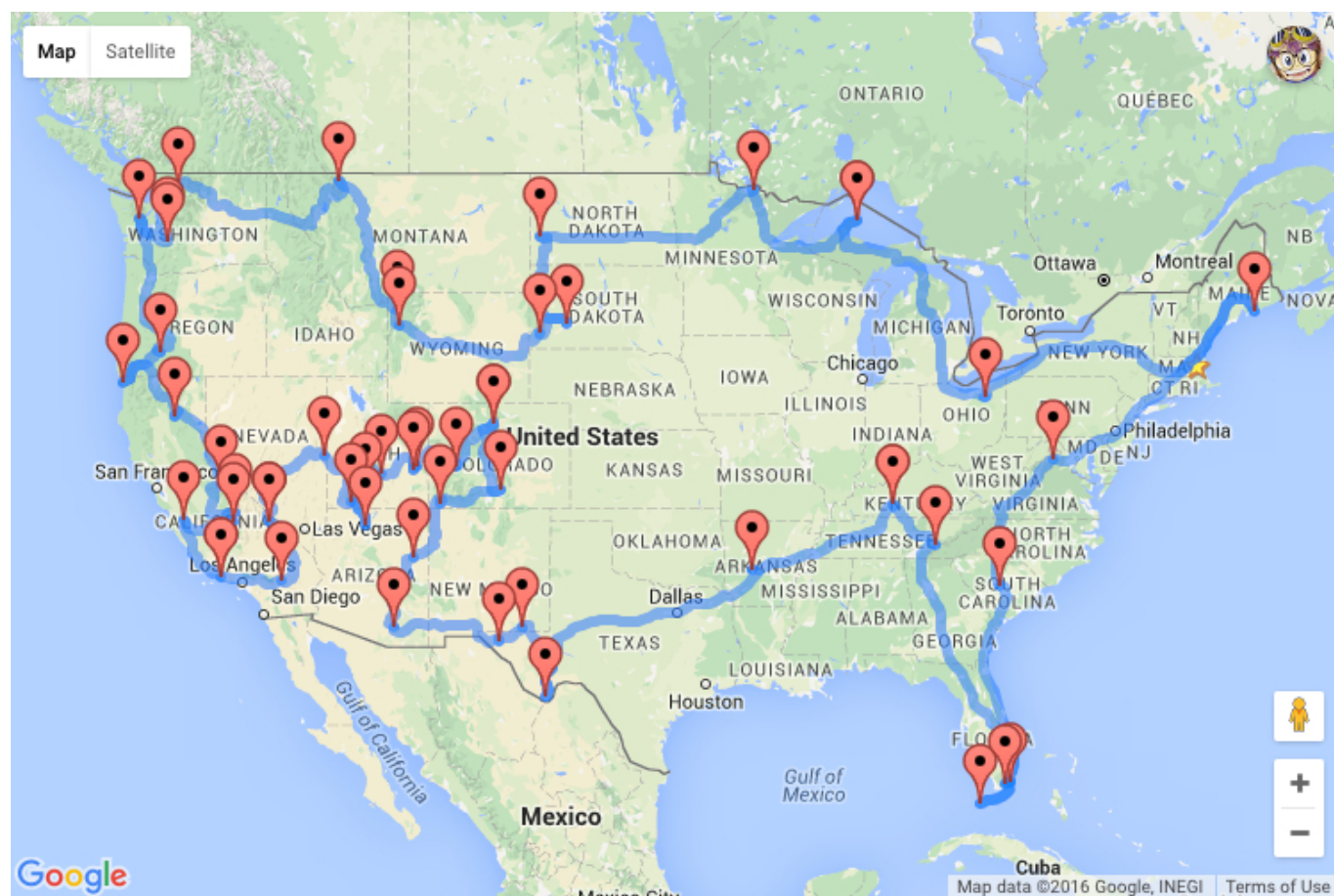


# Computing the Optimal Road Trip Across All 47 National Parks in US Mainland

I found an interesting Python project, which is from [Randy Olson's blog](#).

I wish one day we can visit all the 59 national parks of United States, so I started to look into this project and wanted to come up with an optimal route for a road trip across all 47 national parks in the US mainland.

Result first:



There are in total 59 national parks of United States, 47 of them are in the mainland. The list came from the [Wikipedia](#), I'm listing them here:

Acadia National Park, Mount Desert, ME  
Arches National Park, Grand County, UT  
Badlands National Park, Imlay Township, SD  
Big Bend National Park, TX

Biscayne National Park, Homestead, FL  
Black Canyon of the Gunnison National Park, Montrose County, CO  
Bryce Canyon National Park, Garfield County, UT  
Canyonlands National Park, San Juan County, UT  
Capitol Reef National Park, Wayne County, UT  
Carlsbad Caverns National Park, Eddy County, NM  
Channel Islands National Park, Ventura, CA  
Congaree National Park, Hopkins, SC  
Crater Lake National Park, OR  
Cuyahoga Valley National Park, Brecksville, OH  
Death Valley National Park, CA  
Dry Tortugas National Park, Key West, FL  
Everglades National Park, Monroe County, FL  
Glacier National Park, Flathead County, MT  
Grand Canyon National Park, AZ  
Grand Teton National Park, Teton County, WY  
Great Basin National Park, White Pine County, NV  
Great Sand Dunes National Park and Preserve, Saguache County, CO  
Great Smoky Mountains National Park, Tennessee  
Guadalupe Mountains National Park, Hudspeth County, TX  
Hot Springs National Park, Hot Springs, AR  
Isle Royale National Park, Eagle Harbor Township, MI  
Joshua Tree National Park, Riverside County, CA  
Kings Canyon National Park, Fresno County, CA  
Lassen Volcanic National Park, Shasta County, CA  
Mammoth Cave National Park, KY  
Mesa Verde National Park, Montezuma County, CO  
Mount Rainier National Park, WA  
North Cascades National Park, Whatcom County, WA  
Olympic National Park, Port Angeles, WA  
Petrified Forest National Park, Apache County, AZ  
Pinnacles National Park, San Benito County, CA  
Redwood National Park, Humboldt County, CA  
Rocky Mountain National Park, Larimer County, CO  
Saguaro National Park, Pima County, AZ  
Sequoia National Park, Tulare County, CA  
Shenandoah National Park, Stonewall, VA  
Theodore Roosevelt National Park, North Billings, ND  
Voyageurs National Park, International Falls, MN  
Wind Cave National Park, South Dakota  
Yellowstone National Park, Teton County, WY  
Yosemite National Park, CA  
Zion National Park, Washington County, UT

and just for reference, the followings are not in the mainland, I'm not dealing with them today:

Denali National Park and Preserve, AK  
Gates of the Arctic National Park and Preserve, Bettles, AK  
Glacier Bay National Park and Preserve, Hoonah-Angoon, AK  
Katmai National Park and Preserve, King Salmon, AK

Kenai Fjords National Park, Kenai Peninsula Borough, AK  
Kobuk Valley National Park, Northwest Arctic, AK  
Lake Clark National Park and Preserve, Port Alsworth, AK  
Wrangell-St. Elias National Park & Preserve, Valdez-Cordova, AK  
Haleakalā National Park, Maui County, HI  
Hawaii Volcanoes National Park, HI  
National Park of American Samoa, Eastern, American Samoa  
Virgin Islands National Park, Central, St. John, U.S. Virgin Islands

First, I went through the list and make sure all of them can be correctly located on the Google Maps.

Noticed that the Channel Island National Park is a NP on an island of CA. I replaced it with “The Robert J. Lagomarsino Visitor Center at Channel Islands National Park, Channel Islands National Park, 1901 Spinnaker Dr, Ventura, CA 93001” so that the Google map was able calculate the route to this NP.

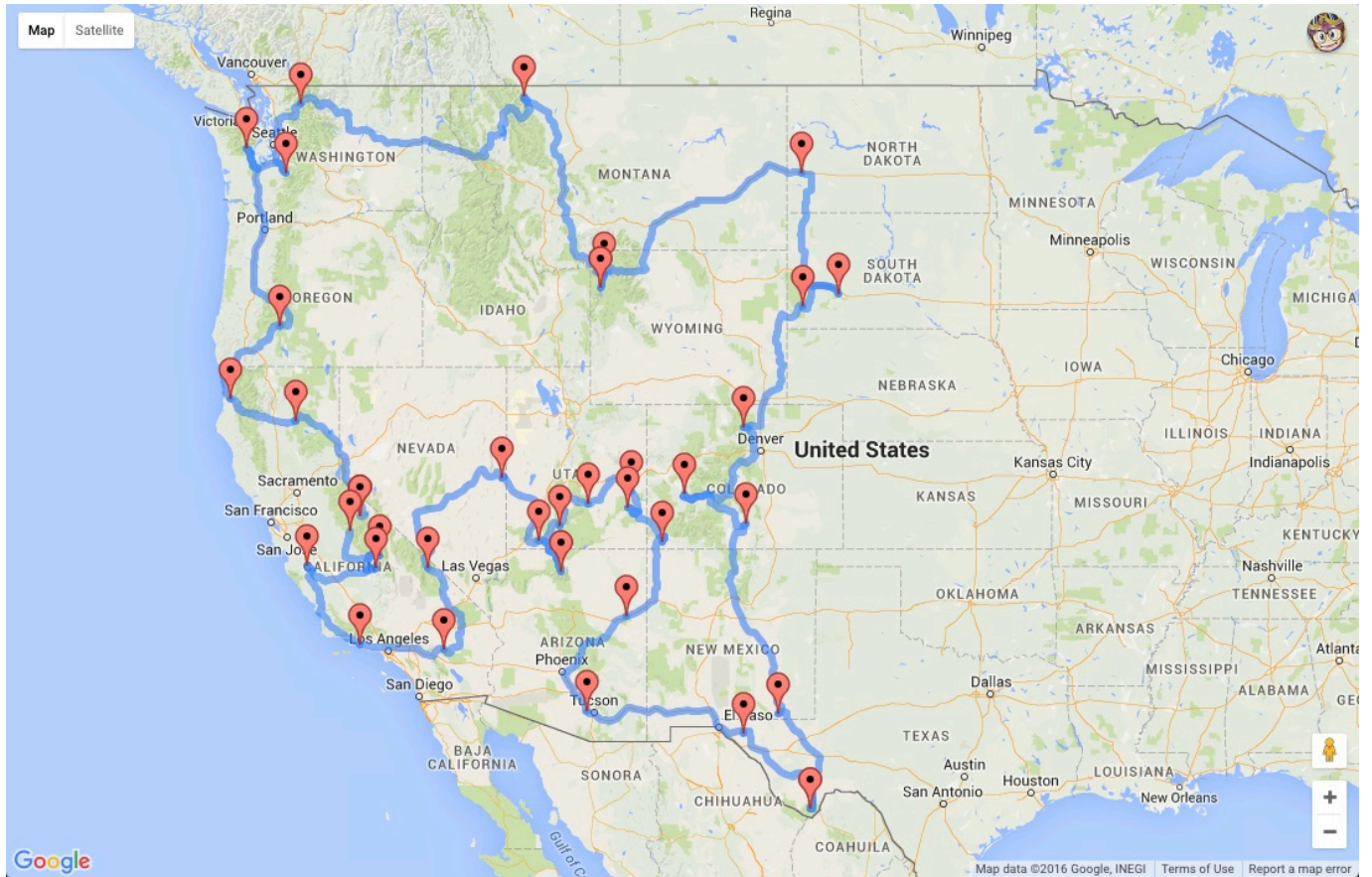
Then I followed [Randy Olson’s Notebook](#), used my own Google API key, replaced the “waypoints” with mine, ran the python script, waited for several minutes and got the result which is at the beginning of the post.

For an interactive map, click [this page](#).

The total distance is 23,530 km, which is 14,706 miles. Assuming I can drive 60 mph, it’s 245 hours(10.2 days) of driving in total. If I drive 4 hours per day, it will take about two months to complete.

However, if we separate the road trip into two, it’s probably more affordable.

Here is the result for the road trip of national parks in the west, it includes 35 national parks.



Interactive map: [Click me](#)

The total distance of this route is 13,165 km, which is 8,228 miles. It will take around “only” one month to complete. Sounds much more realistic and promising!