

Geo-sampling

This document walks you through different scenarios in the package.

GeoscienceAustralia / geo-sampling

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Branch: master geo-sampling / Run_Scripts.R Find file Copy path

mfaraki Update Run_Scripts.R 065fe2b 10 minutes ago

2 contributors

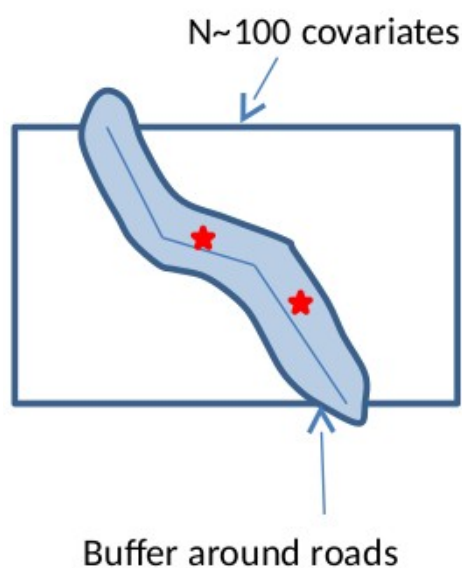
46 lines (36 sloc)

Raw Blame History

```
1 # A text file containing address of each input .tif covariate in one line (insert # in the beginning of a line to exclude the cov
2 covariate_file = "/home/masoud/GA_data/GA-cover2/sirsam_covariates_Na.txt" # For Sirsam dataset
3 #covariate_file = "/short/ge3/jrw547/GA-cover2/sirsam_covariates_Na.txt" # For Sirsam dataset (in NCI)
4 #covariate_file = "/g/data1a/ge3/john/jobs/national/geochem/RF_Wii/weathering_index_LHC.txt" # For national dataset
5
6 #here your input data (shapefile) exist
7 input_data = "/home/masoud/GA_data/GA-cover2";
8 #input_data = "/short/ge3/jrw547/GA-cover2"
9 #input_data = "/g/data/ge3/covariates/Sites/geochem"
10
11 exp_folder = "." # Output folder. Where you want to store the results
12 no_samples = c( 32 , 64 ) # Number of output samples. Try different values or for example use seq(20,50,10) to have 20 30 40 50 s
13
14 source("Buffer_Sample.R")
15 source("sample_clhs.R")
16
17 #First scenario: Buffering along the roads and then sampling
```

First Scenario

First buffer around a road network then sample.



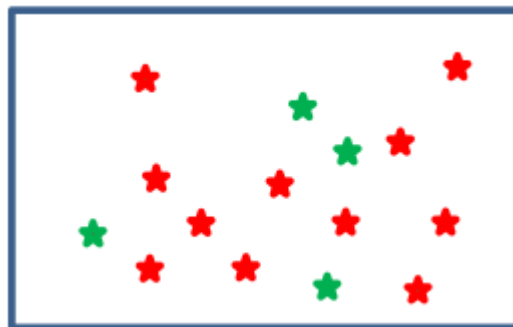
```

46 lines (36 sloc) | 2.45 KB
Raw Blame History
1 # A text file containing address of each input .tif covariate in one line (insert # in the beginning of a line to exclude the covariate)
2 covariate_file = "/home/masoud/GA_data/GA-cover2/sirsam_covariates_Na.txt" # For Sirsam dataset
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4 #covariate_file = "/g/data1a/ge3/john/jobs/national/geochem/RF_Wii/weathering_index_LHC.txt" # For national dataset
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6 # Where your input data (shapefile) exist
7 input_data = "/home/masoud/GA_data/GA-cover2";
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11 exp_folder = "." # Output folder. Where you want to store the results
12 no_samples = c( 32 , 64 ) # Number of output samples. Try different values or for example use seq(20,50,10) to have 20 30 40 50
13
14 source("Buffer_Sample.R")
15 source("sample_clhs.R")
16
17 #First scenario: Buffering along roads and then sampling
18 width = 0.005 # Buffer size
19 road_shapefile_name = "Roads_Sir_Sam" # Line segments
20 Buffer_Sample(covariate_file, input_data, road_shapefile_name, exp_folder, no_samples, width)
21
22 #Second scenario: Sample when target points are available
23 shapefile_name = "geochem_sites" # Target points shapefile. It should be without extension.
24 shapefile_name = "NGSA_IM_TOS" # For national dataset
25 sample_clhs(covariate_file, input_data, shapefile_name, exp_folder, no_samples)
26

```

Second Scenario

Intersect the input covariates with existing target points then sample.



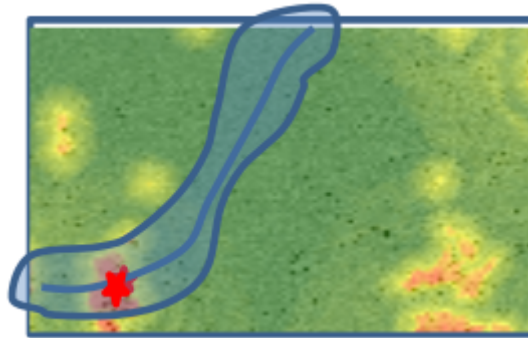
```

16
17 #First scenario: Buffering along the roads and then sampling
18 width = 0.005 # Buffer size
19 road_shapefile_name = "Roads_Sir_Sam" # Line segments
20 Buffer_Sample(covariate_file, input_data, road_shapefile_name, exp_folder, no_samples, width)
21
22 #Second scenario: Sample when target points are available
23 shapefile_name = "geochem_sites" # Target points shapefile. It should be without extension.
24 shapefile_name = "NGSA_IM_TOS" # For national dataset
25 sample_clhs(covariate_file, input_data, shapefile_name, exp_folder, no_samples)
26
27 #Third scenario: Similar to the first scenario but with an existing model used for weighting the inputs
28 width = 0.005 # Buffer size
29 existing_model = "./sirsam_Na_original_prediction.tif"
30 road_shapefile_name = "Roads_Sir_Sam" # Line segments
31 Buffer_Sample(covariate_file, input_data, road_shapefile_name, exp_folder, no_samples, width, existing_model)
32
33 #Fourth scenario: Similar to the second scenario but with an existing model used for weighting the inputs
34 existing_model = "./sirsam_Na_original_prediction.tif"
35 shapefile_name = "geochem_sites" # geochem_sites_log Target points
36 source("sample_clhs_existing_model.R")
37 sample_clhs(covariate_file, input_data, shapefile_name, exp_folder, no_samples, existing_model)
38

```

Third Scenario

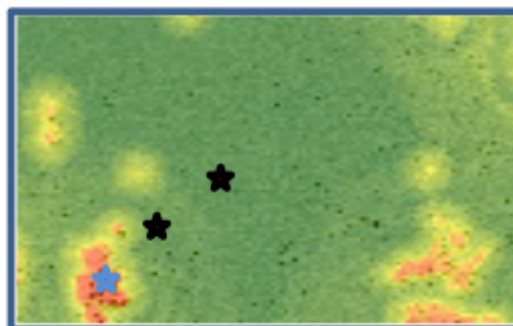
Similar to the first scenario but there is an existing prediction model for weighting.



```
16
17 #First scenario: Buffering along the roads and then sampling
18 #width = 0.005 # Buffer size
19 #road_shapefile_name = "Roads_Sir_Sam" # Line segments
20 #Buffer_Sample(covariate_file, input_data, road_shapefile_name, exp_folder, no_samples, width)
21
22 #Second scenario: Sample when target points are available
23 #shapefile_name = "geochem_sites" # Target points shapefile. It should be without extension.
24 #shapefile_name = "NGSA_IM_TOS" # For national dataset
25 #sample_clhs(covariate_file, input_data, shapefile_name, exp_folder, no_samples)
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32
33 #Fourth scenario: Similar to the second scenario but with an existing model used for weighting the inputs
34 #existing_model = "./sirsam_Na_original_prediction.tif"
35 #shapefile_name = "geochem_sites" # geochem_sites_log Target points
36 #sample_clhs(covariate_file, input_data, shapefile_name, exp_folder, no_samples, existing_model)
37
```

Fourth Scenario

Similar to the second scenario but there is an existing prediction model for weighting.



```

21
22 #Second scenario: Sample when target points are available
23 #shapefile_name = "geochem_sites" # Target points shapefile. It should be without extension.
24 #shapefile_name = "NGSA_IM_TOS" # For national dataset
25 #sample_cls(covariate_file, input_data, shapefile_name, exp_folder, no_samples)
26
27 #Third scenario: Similar to the first scenario but with an existing model used for weighting the inputs
28 #width = 0.005 # Buffer size
29 #existing_model = "./sirsam_Na_original_prediction.tif"
30 #road_shapefile_name = "Roads_Sir_Sam" # Line segments
31 #Buffer_Sample(covariate_file, input_data, road_shapefile_name, exp_folder, no_samples, width, existing_model)
32
33 #Fourth scenario: Similar to the second scenario but with an existing model used for weighting the inputs
34 #existing_model = "./sirsam_Na_original_prediction.tif"
35 #shapefile_name = "geochem_sites" # geochem_sites_log Target points
36 #sample_cls(covariate_file, input_data, shapefile_name, exp_folder, no_samples, existing_model)
37

```

Running in the NCI

To run the Run_Scripts.R in the NCI environment, you can run:

qsub Run_NCI.sh

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Branch: master
geo-sampling / Run_NCI.sh
Find file
Copy path

mfaraki Update Run_NCI.sh
a4e409e 24 days ago
1 contributor

Executable File
20 lines (15 sloc)
352 Bytes
Raw
Blame
History

```

1 #!/bin/bash
2 #PBS -P ge3
3 #PBS -q expressbw
4 #PBS -l walltime=02:00:00,mem=256GB,ncpus=4,jobs=100GB
5 #PBS -l wd
6 #PBS -j oe
7
8 module unload intel-fc intel-cc
9 module load intel-fc/16.0.3.210
10 module load intel-cc/16.0.3.210
11 module load gdal/2.1.3
12 module load proj/4.8.0
13 module load geos/3.5.0
14 module load R/3.4.0
15
16 Rscript Run_Scripts.R
17 #R --vanilla output
18
19

```