## # HOW TO INSTALL AND USE "REEFFECTS" SOFTWARE

\*\* Running using Windows \*\*

First make sure you install the following programs:

- Microsoft Visual C++ Redistributable for Visual Studio 2017:
  <a href="https://support.microsoft.com/en-us/help/2977003/the-latest-supported-visual-c-downloads">https://support.microsoft.com/en-us/help/2977003/the-latest-supported-visual-c-downloads</a>
- Anaconda with Python 3.6: <a href="https://www.anaconda.com/download/">https://www.anaconda.com/download/</a>
- Gnuplot (do not forget to mark the Add to PATH option):
  https://sourceforge.net/projects/gnuplot/files/latest/download?source=files

Once you have everything installed, open the Anaconda console (Anaconda Prompt) and 'cd' to the root directory where you unzipped "REEffects.zip" (preferentially in C:\), for example, type cd C:\REEffects. In order to run just type 'run.bat cfg/config\_caucaia\_road'. This is an example configuration file, inside the cfg directory you will see this example.

As with the sample configuration for "road" (file config\_caucaia\_road) the variables you have to set are the following:

```
A = 0.057
```

B = 16.12

K = 10000

Rmax = 1000

output dir = ./out/caucaia road

output prefix = caucaia road

input lines file = ./data/caucaia/road.shp

input points file = ./data/caucaia/sites.shp

Once you have everything installed, open the Anaconda console (Anaconda Prompt) and 'cd' to the root directory where you unzipped "REEffects.zip" (preferentially in C:\), for example, type cd C:\REEffectsRelease1. In order to run just type 'run.bat cfg/config\_caucaia\_edge'. This is an example configuration file, inside the cfg directory you will see this example.

For file config\_caucaia\_edge, the variables you have to set are the following:

A = 0.057

B = 16.12

K = 10000

Rmax = 100000000000

output dir = ./out/caucaia edge

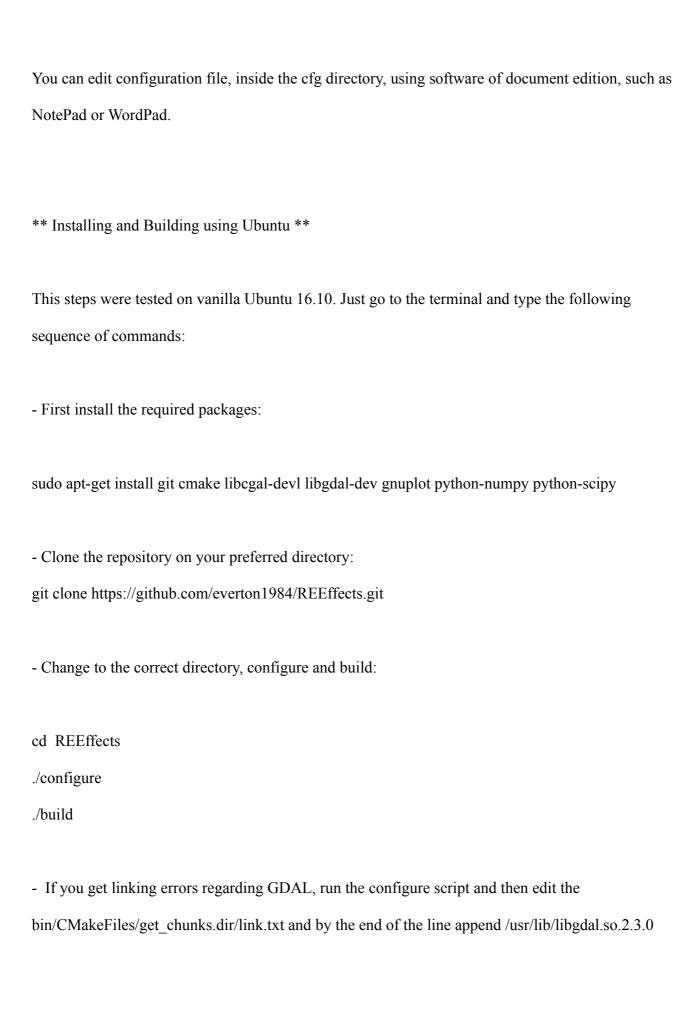
output\_prefix = caucaia\_edge

input\_lines\_file = ./data/caucaia/forest.shp

input points file = ./data/caucaia/sites.shp

The A, B, K and Rmax are related to the algorithm itself and their description is left to the paper; everything else is just telling the program where your data files are and where it should save the results.

- output\_dir Path to the output directory where the results will be saved. Be sure to create the folders or else the program will fail.
- output prefix A string prefixing all output files generated by REEffects software.
- input lines file The shape file (used in GIS software) containing the list of roads.
- input\_points\_file The shape file (used in GIS software) containing the list of points where REEffects software will measure the road index.



\*\* Running \*\*

Make sure you have a config file; examples can be found at the cfg directory. Then go to the root directory and type:

\$./run.sh <config file>

Fill the config\_file part with the address to the config file you want to use.

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