Assignment 5 Report

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1.2 Maps are plotted from script and saved as jpeg file in the same directory.

1.3 I don't think a specific threshold is meaningful here. Because we can pick up places that has relative higher wind speed instead of setting up somehow certain wind speed limit for determination. Judging windfarms only by simply a threshold is not that significant. According to the result map, two place are selected that suitable for windfarms construction: mid-northern Inner Mongolia and northern Tibet. Those places are flat in topography (one is grasslands and the other is highland). And the human activities there are quite natural respect to developed areas. For regions like western Taiwan and northern Qinghai, mountains (Taiwan Central Range and Qilian Mountain) may increase the construction difficult and cost. For coastal regions, most of them are already urban or industry regions.

1.4 Mid-eastern Sichuan would be an appropriate place to construct photovoltaics (PV) farms. I don't choose middle of this province is because mega city Chengdu is there. In addition, precipitation result shows this is a low precipitation place, which mean rainy days might be lower if simply due to precipitation amount. Based on its location, this PV farms is able to supply a large places due to this is nearly middle of China.

2.1

```
[ese-xuhx@login03 assignment]$ ln -s ~/data_demo/ data_demo_link
[ese-xuhx@login03 assignment]$ ll
total 1
lrwxrwxrwx 1 ese-xuhx ese-ouycc 25 Nov 28 21:19 data_demo_link -> /work/ese-xuhx/data_demo/
```

2.2

```
[ese-xuhx@login03 data]$ touch planets.txt_1st
[ese-xuhx@login03 data]$ ll
total 260
-rw-r--r-- 1 ese-xuhx ese-ouycc   283 Nov 24 18:59 amino-acids.txt
drwxr-xr-x 2 ese-xuhx ese-ouycc  4096 Nov 24 18:59 animal-counts
-rw-r--r-- 1 ese-xuhx ese-ouycc   136 Nov 24 18:59 animals.txt
drwxr-xr-x 2 ese-xuhx ese-ouycc  4096 Nov 24 18:59 elements
-rw-r--r-- 1 ese-xuhx ese-ouycc   554 Nov 24 18:59 morse.txt
drwxr-xr-x 2 ese-xuhx ese-ouycc  4096 Nov 26 20:10 pdb
-rw-r--r-- 1 ese-xuhx ese-ouycc  8898 Nov 24 18:59 planets.txt
-rw-r--r-- 1 ese-xuhx ese-ouycc     0 Nov 28 21:21 planets.txt_1st
-rw-r--r-- 1 ese-xuhx ese-ouycc    33 Nov 26 19:09 print.sh
-rw-r--r-- 1 ese-xuhx ese-ouycc    45 Nov 24 18:59 salmon.txt
-rw-r--r-- 1 ese-xuhx ese-ouycc 73861 Nov 24 18:59 sunspot.txt
```

2.3

```
[ese-xuhx@login03 data]$ echo ~
/work/ese-xuhx
[ese-xuhx@login03 data]$ █
```

2.4

```
/work/ese-xuhx
[ese-xuhx@login03 data]$ find ~/data_demo/data/pdb/ | wc -l
52
[ese-xuhx@login03 data]$ █
```

2.5

```
[ese-xuhx@login03 data]$ grep "C" -o  ~/data_demo/data/pdb/tnt.pdb | wc -l
10
[ese-xuhx@login03 data]$ █
```

2.6

```
[ese-xuhx@login03 data]$ diff ~/data_demo/data/pdb/ethane.pdb ~/data_demo/data/pdb/ethanol.pdb
1,11c1,12
< COMPND      ETHANE
< AUTHOR      DAVE WOODCOCK  95 12 18
< ATOM      1  C           1      -0.752   0.001  -0.141  1.00  0.00
< ATOM      2  C           1       0.752  -0.001   0.141  1.00  0.00
< ATOM      3  H           1      -1.158   0.991   0.070  1.00  0.00
< ATOM      4  H           1      -1.240  -0.737   0.496  1.00  0.00
< ATOM      5  H           1      -0.924  -0.249  -1.188  1.00  0.00
< ATOM      6  H           1       1.158  -0.991  -0.070  1.00  0.00
< ATOM      7  H           1       0.924   0.249   1.188  1.00  0.00
< ATOM      8  H           1       1.240   0.737  -0.496  1.00  0.00
< TER       9               1
---
> COMPND      ETHANOL
> AUTHOR      DAVE WOODCOCK  96 01 03
> ATOM      1  C           1      -0.426  -0.115  -0.147  1.00  0.00
> ATOM      2  O           1      -0.599   1.244  -0.481  1.00  0.00
> ATOM      3  H           1      -0.750  -0.738  -0.981  1.00  0.00
> ATOM      4  H           1      -1.022  -0.351   0.735  1.00  0.00
> ATOM      5  H           1      -1.642   1.434  -0.689  1.00  0.00
> ATOM      6  C           1       1.047  -0.383   0.147  1.00  0.00
> ATOM      7  H           1       1.370   0.240   0.981  1.00  0.00
> ATOM      8  H           1       1.642  -0.147  -0.735  1.00  0.00
> ATOM      9  H           1       1.180  -1.434   0.405  1.00  0.00
> TER      10               1
[ese-xuhx@login03 data]$ █
```

2.7

```
4196     /work/ese-xuhx/data_demo
[ese-xuhx@login03 data]$ du -s ~/data_demo
4196     /work/ese-xuhx/data_demo
[ese-xuhx@login03 data]$ █
```

2.8

```
[ese-xuhx@login03 ~]$ cp -r ~/data_demo/ ~/assignment/data_demo_new
[ese-xuhx@login03 ~]$ ll ~/assignment/data_demo_new
total 135
-rw-r--r-- 1 ese-xuhx ese-ouycc       6 Nov 28 22:09 1.txt
-rw-r--r-- 1 ese-xuhx ese-ouycc       8 Nov 28 22:09 2.txt
drwxr-xr-x 2 ese-xuhx ese-ouycc    4096 Nov 28 22:09 creatures
drwxr-xr-x 5 ese-xuhx ese-ouycc    4096 Nov 28 22:09 data
lrwxrwxrwx 1 ese-xuhx ese-ouycc      14 Nov 28 22:09 date_demo_link ->
-rw-r--r-- 1 ese-xuhx ese-ouycc      68 Nov 28 22:09 file2
-rw-r--r-- 1 ese-xuhx ese-ouycc     114 Nov 28 22:09 log
-rw-r--r-- 1 ese-xuhx ese-ouycc       0 Nov 28 22:09 log1
drwxr-xr-x 2 ese-xuhx ese-ouycc    4096 Nov 28 22:09 molecules
drwxr-xr-x 3 ese-xuhx ese-ouycc    4096 Nov 28 22:09 north-pacific-gyre
-rw-r--r-- 1 ese-xuhx ese-ouycc      86 Nov 28 22:09 notes.txt
-rw-r--r-- 1 ese-xuhx ese-ouycc      32 Nov 28 22:09 pizza.cfg
drwxr-xr-x 2 ese-xuhx ese-ouycc    4096 Nov 28 22:09 R
-rw-r--r-- 1 ese-xuhx ese-ouycc   21583 Nov 28 22:09 solar.pdf
drwxr-xr-x 2 ese-xuhx ese-ouycc    4096 Nov 28 22:09 test
drwxr-xr-x 5 ese-xuhx ese-ouycc    4096 Nov 28 22:09 writing
```

```
[ese-xuhx@login03 assignment]$ unzip -q -o data_demo.zip
[ese-xuhx@login03 assignment]$ ll
total 642
drwxr-xr-x 3 ese-xuhx ese-ouycc    4096 Nov 28 22:19 copy
lrwxrwxrwx 1 ese-xuhx ese-ouycc      25 Nov 28 21:19 data_demo_link -> /work/ese-xuhx/data_demo/
drwxr-xr-x 9 ese-xuhx ese-ouycc    4096 Nov 28 22:22 data_demo_new
-rw-r--r-- 1 ese-xuhx ese-ouycc  595521 Nov 28 22:11 data_demo.zip
drwxr-xr-x 3 ese-xuhx ese-ouycc    4096 Nov 28 22:20 work
[ese-xuhx@login03 assignment]$
```

2.9

```
[ese-xuhx@login03 assignment]$ chmod 750 data_demo_new
[ese-xuhx@login03 assignment]$ ll
total 642
drwxr-xr-x 3 ese-xuhx ese-ouycc    4096 Nov 28 22:19 copy
lrwxrwxrwx 1 ese-xuhx ese-ouycc      25 Nov 28 21:19 data_demo_link -> /work/ese-xuhx/data_demo/
drwxr-x--- 9 ese-xuhx ese-ouycc    4096 Nov 28 22:22 data_demo_new
```

2.10

```
-rw-r--r-- 1 ese-xuhx ese-ouycc  595521 Nov 28 22:11 data_dei
[ese-xuhx@login03 assignment]$ history 10
  682  rm ~/assignment/test
  683  ps
  684  kill 265420
  685  ps
  686  cd assignment
  687  cd ~/assignment
  688  rm worl
  689  rm work
  690  ll
  691  history 10
[ese-xuhx@login03 assignment]$
```