

Project 2 Report

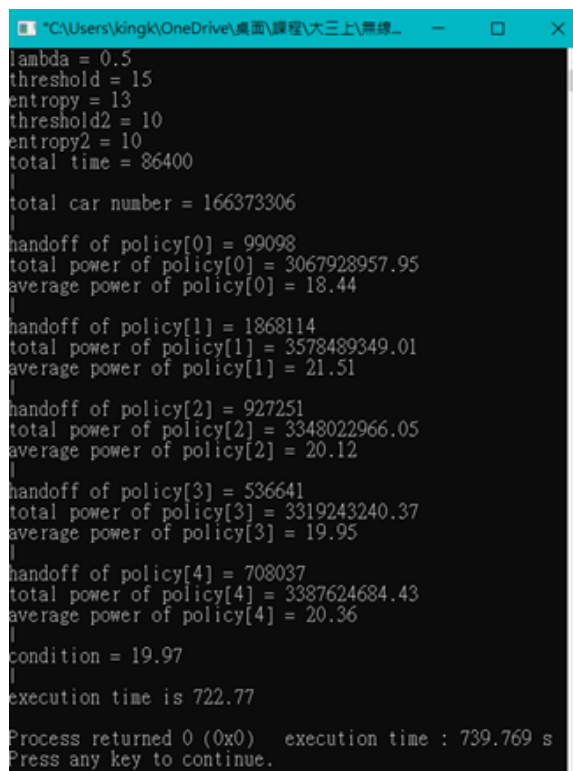
F74072251 蔡哲平

程式使用方法

- 手動輸入 `lambda` `threshold` `entropy` `threshold2` `entropy2` `total time`

我的policy

- 當 `Pold < threshold2` 或 `Pnew > Pold + entropy2`，就會 handoff，實測出來發現當 `threshold2 = 10` `entropy2 = 10` 的時候，其 power 比 policy2 還高，handoff 也比 policy2 低，算是優化一些
- 圖證



```
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lambda = 0.5
threshold = 15
entropy = 13
threshold2 = 10
entropy2 = 10
total time = 86400

total car number = 166373306

handoff of policy[0] = 99098
total power of policy[0] = 3067928957.95
average power of policy[0] = 18.44

handoff of policy[1] = 1868114
total power of policy[1] = 3578489349.01
average power of policy[1] = 21.51

handoff of policy[2] = 927251
total power of policy[2] = 3348022966.05
average power of policy[2] = 20.12

handoff of policy[3] = 536641
total power of policy[3] = 3319243240.37
average power of policy[3] = 19.95

handoff of policy[4] = 708037
total power of policy[4] = 3387624684.43
average power of policy[4] = 20.36

condition = 19.97

execution time is 722.77

Process returned 0 (0x0)   execution time : 739.769 s
Press any key to continue.
```

$$\lambda = 1/5$$

- Graph

```

lambda = 0.2
threshold = 15
entropy = 13
threshold2 = 10
entropy2 = 10
total time = 86400

total car number = 66582028

handoff of policy[0] = 39551
total power of policy[0] = 1227936186.61
average power of policy[0] = 18.44

handoff of policy[1] = 748299
total power of policy[1] = 1432833580.86
average power of policy[1] = 21.52

handoff of policy[2] = 371060
total power of policy[2] = 1340216653.21
average power of policy[2] = 20.13

handoff of policy[3] = 215925
total power of policy[3] = 1329243071.73
average power of policy[3] = 19.96

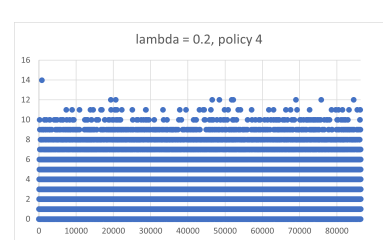
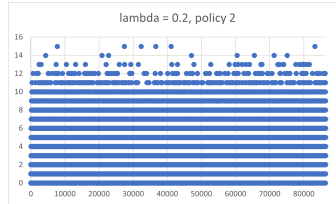
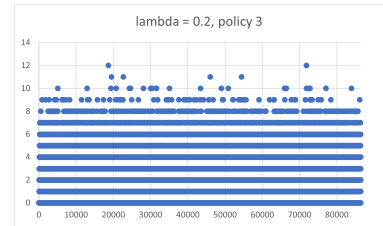
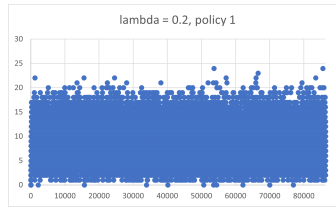
handoff of policy[4] = 284621
total power of policy[4] = 1356704960.39
average power of policy[4] = 20.38

condition = 19.98

execution time is 257.60

Process returned 0 (0x0)   execution time : 323.389 s
Press any key to continue.

```



$$\lambda = 1/3$$

- Graph

```

lambda = 0.333333
threshold = 15
entropy = 13
threshold2 = 10
entropy2 = 10
total time = 86400

total car number = 110822129

handoff of policy[0] = 66537
total power of policy[0] = 2043715191.11
average power of policy[0] = 18.44

handoff of policy[1] = 1244720
total power of policy[1] = 2383737177.45
average power of policy[1] = 21.51

handoff of policy[2] = 618106
total power of policy[2] = 225028470.87
average power of policy[2] = 20.12

handoff of policy[3] = 357000
total power of policy[3] = 2211157409.61
average power of policy[3] = 19.95

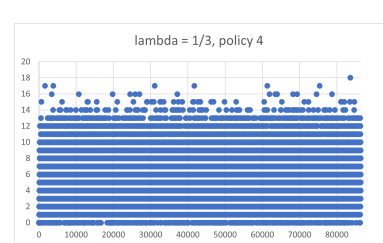
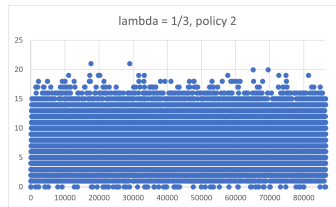
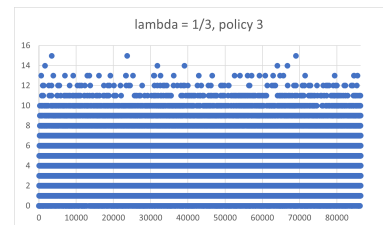
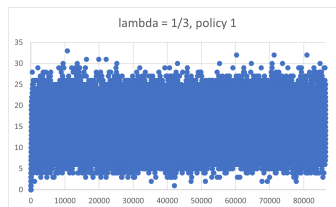
handoff of policy[4] = 470940
total power of policy[4] = 2256601849.74
average power of policy[4] = 20.36

condition = 19.98

execution time is 437.09

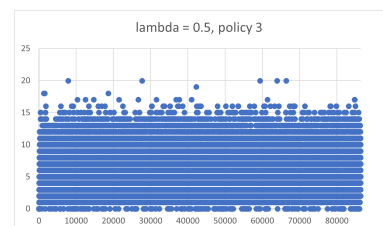
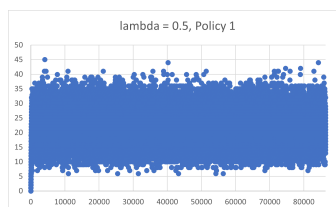
Process returned 0 (0x0)   execution time : 455.656 s
Press any key to continue.

```



$$\lambda = 1/2$$

- Graph



```

lambda = 0.5
threshold = 15
entropy = 10
threshold2 = 10
entropy2 = 10
total time = 86400

total car number = 166373306

handoff of policy[0] = 99098
total power of policy[0] = 3067928957.95
average power of policy[0] = 18.44

handoff of policy[1] = 1868114
total power of policy[1] = 3578489349.01
average power of policy[1] = 21.51

handoff of policy[2] = 927251
total power of policy[2] = 3348022966.05
average power of policy[2] = 20.12

handoff of policy[3] = 536641
total power of policy[3] = 3319243240.37
average power of policy[3] = 19.95

handoff of policy[4] = 708037
total power of policy[4] = 3387624684.43
average power of policy[4] = 20.36

condition = 19.97

execution time is 722.77
Process returned 0 (0x0)   execution time : 739.769 s
Press any key to continue.

```

