

Digital Signal Processing Homework 1

Discrete Hidden Markov Model Implement b05901033 電機三 莊永松

Environment

```
OS: Ubuntu 16.04.5 LTS (GNU/Linux 4.15.0-36-generic x86_64)
Compiler: g++ (Ubuntu 5.4.0-6ubuntu1~16.04.10) 5.4.0 20160609
CPU: Intel(R) Xeon(R) CPU E5-1620 v3 @ 3.50GHz
RAM: 32G
```

How to execute?

- Use the command `make` to compile executable file `train test accuracy`, use `make clean` to remove all compiled files.
- Train: `./train [iteration] [initial model file] [sequence file] [output file]`
- Test: `./test [model list] [sequence file] [output file]`
- Compute Accuracy: `./accuracy [predict file] [answer file] [output file]`

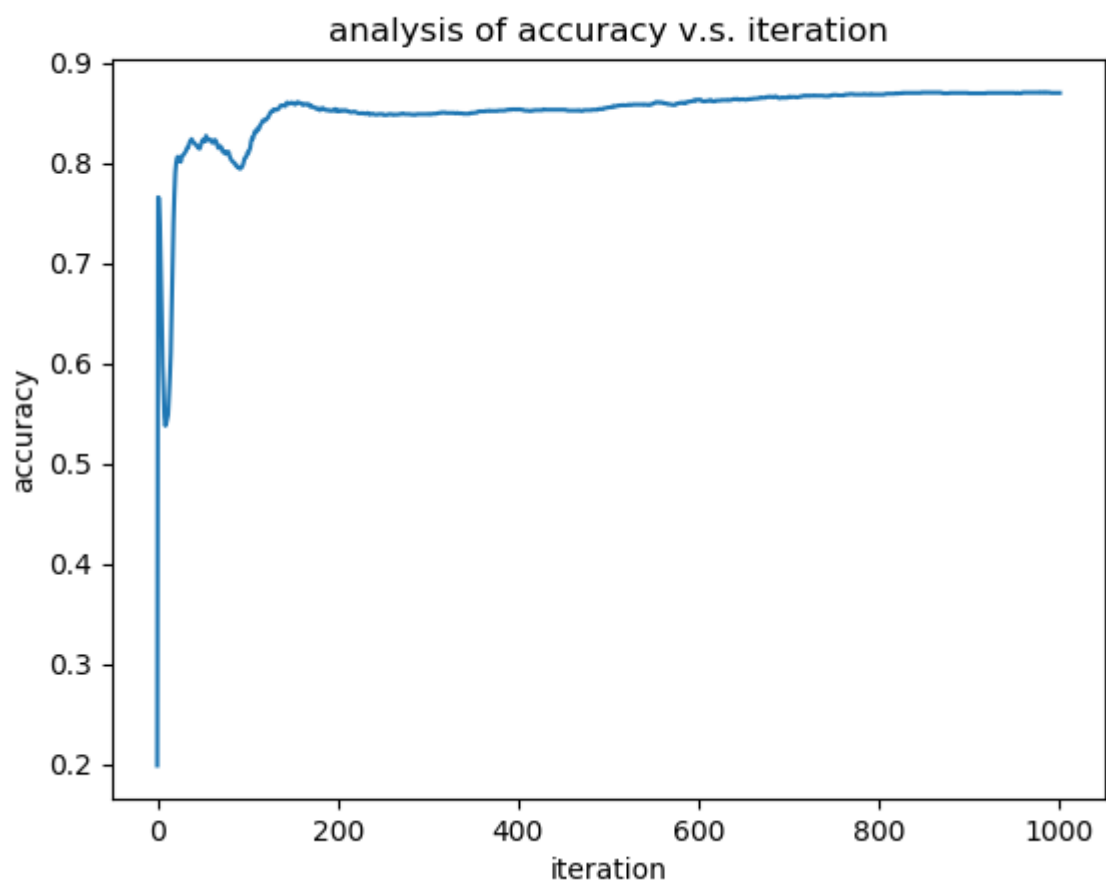
Some Analysis

Relation between accuracy and iteration

iteration	accuracy
0	0.1992
1	0.7660
5	0.6484
10	0.5408
15	0.6104
20	0.7904
50	0.8228

iteration	accuracy
100	0.8104
150	0.8600
200	0.8524
500	0.8556
900	0.8696
1000	0.8700

visualize



log scale for iteration axis

