

DSP homework 2-1 report

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1. Run Baseline:

```
===== HTK Results Analysis =====
Date: Wed Nov 22 21:37:08 2017
Ref : labels/answer.mlf
Rec : result/result.mlf
----- Overall Results -----
SENT: %Correct=38.54 [H=185, S=295, N=480]
WORD: %Corr=96.61, Acc=74.34 [H=1679, D=13, S=46, I=387, N=1738]
=====
```

2. Improve accuracy:

```
===== HTK Results Analysis =====
Date: Thu Nov 23 11:03:20 2017
Ref : labels/answer.mlf
Rec : result/result.mlf
----- Overall Results -----
SENT: %Correct=88.96 [H=427, S=53, N=480]
WORD: %Corr=96.89, Acc=96.55 [H=1684, D=40, S=14, I=6, N=1738]
=====
```

3. Training process:

1.一開始增加 iteration 數，增加到 10 次，但是上升程度並不大

```
===== HTK Results Analysis =====
Date: Thu Nov 23 10:41:57 2017
Ref : labels/answer.mlf
Rec : result/result.mlf
----- Overall Results -----
SENT: %Correct=46.04 [H=221, S=259, N=480]
WORD: %Corr=96.66, Acc=77.68 [H=1680, D=17, S=41, I=330, N=1738]
=====
```

2.增加 state 數至 10 個，iteration 維持 10 次


```

===== HTK Results Analysis =====
Date: Thu Nov 23 10:55:14 2017
Ref : labels/answer.mlf
Rec : result/result.mlf
----- Overall Results -----
SENT: %Correct=88.33 [H=424, S=56, N=480]
WORD: %Corr=96.32, Acc=96.14 [H=1674, D=43, S=21, I=3, N=1738]
=====

```

Accuracy 衝過 96%，但也許可以更好

5.修改 mix2_10.hed 以及 mixAdd2_10.hed

MU 2 {liN.state[2-14].mix}	MU +2 {liN.state[2-14].mix}
MU 2 {#i.state[2-14].mix}	MU +2 {#i.state[2-14].mix}
MU 2 {#er.state[2-14].mix}	MU +2 {#er.state[2-14].mix}
MU 2 {san.state[2-14].mix}	MU +2 {san.state[2-14].mix}
MU 2 {sy.state[2-14].mix}	MU +2 {sy.state[2-14].mix}
MU 2 {#u.state[2-14].mix}	MU +2 {#u.state[2-14].mix}
MU 2 {liou.state[2-14].mix}	MU +2 {liou.state[2-14].mix}
MU 2 {qi.state[2-14].mix}	MU +2 {qi.state[2-14].mix}
MU 2 {ba.state[2-14].mix}	MU +2 {ba.state[2-14].mix}
MU 2 {jiou.state[2-14].mix}	MU +2 {jiou.state[2-14].mix}
MU 3 {sil.state[2-14].mix}	MU +2 {sil.state[2-14].mix}
	MU +2 {sp.state[2-14].mix}

Mix2_10.hed

mixAdd2_10.hed

```

===== HTK Results Analysis =====
Date: Thu Nov 23 11:03:20 2017
Ref : labels/answer.mlf
Rec : result/result.mlf
----- Overall Results -----
SENT: %Correct=88.96 [H=427, S=53, N=480]
WORD: %Corr=96.89, Acc=96.55 [H=1684, D=40, S=14, I=6, N=1738]
=====

```

正確率有再上升，但是上升幅度並沒有很多

6. 增加 iteration 至 1000，accuracy 突破 97%

```

===== HTK Results Analysis =====
Date: Thu Nov 23 16:04:01 2017
Ref : labels/answer.mlf
Rec : result/result.mlf
----- Overall Results -----
SENT: %Correct=91.46 [H=439, S=41, N=480]
WORD: %Corr=97.41, Acc=97.30 [H=1693, D=35, S=10, I=2, N=1738]
=====

```

最後還是透過增加 training 次數達到提高正確率的目的