

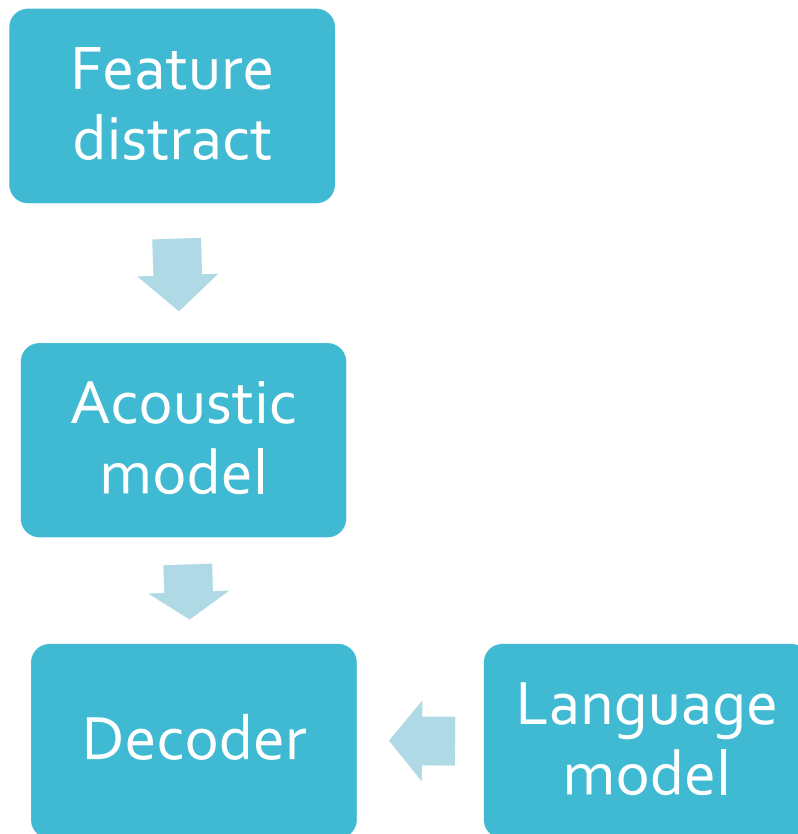
# One-month Report

Yang Wei

# Work done

- Learn some background knowledge in ASR.
- Train some models in thchs30.
- Rearrange two new test sets, distract their features and decode them with the trained models.
- Train and test tdnn and tdnn\_discriminative model.
- Train and compare several LM with two acoustic models.
- Check 1/8 of a dictionary text.

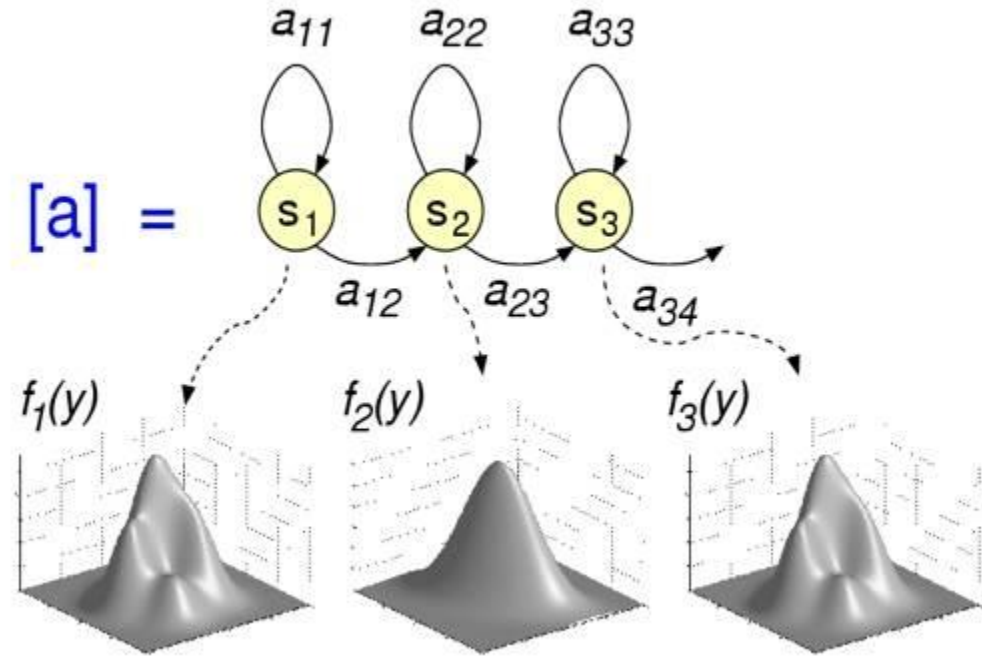
Background



# Background

- GMM-HMM

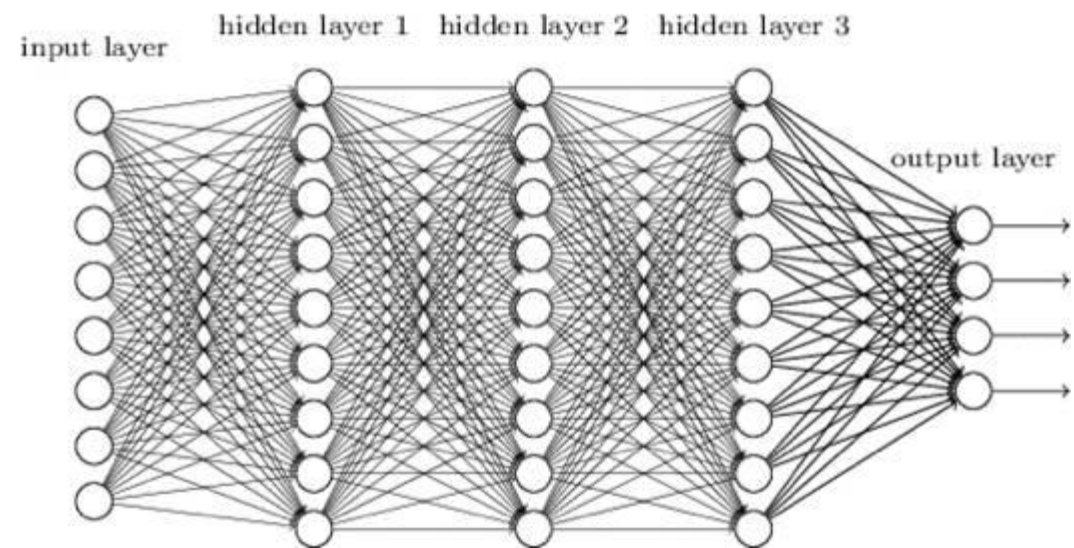
## Hidden Markov Models



# Background

- DNN-HMM

## Deep neural network



thchs30

- Train
  - dnn
- Decode
  - mono
  - Tri1
  - Tri2b
  - Tri3b
  - Tri4b
  - Tri4b\_dnn

thchs30

	RESULTS	decode
exp/mono/decode_test_word/wer_9_0.0	50.88	50.70
exp/tri1/decode_test_word/wer_10_0.0	35.97	36.09
exp/tri2b/decode_test_word/wer_10_0.0	32.14	32.22
exp/tri3b/decode_test_word/wer_10_0.0	29.47	29.61
exp/tri3b/decode_test_word.si/wer_9_0.0	33.65	33.46
exp/tri4b/decode_test_word/wer_11_0.0	28.07	28.10
exp/tri4b/decode_test_word.si/wer_10_0.0	31.50	31.51
exp/tri4b_dnn/decode_test_word/wer_7_0.0	23.68	24.54

Kaldi-trunk/...  
/wsj

- Tdnn
- Tdnn\_discriminative



# Compare different LMs

- Acoustic model
  - Train\_myhexin\_20161019
  - Train\_100h
- Test dataset
  - Test\_myhexin\_20161019
  - Test\_1000ju
  - Test\_2000ju

# Compare different LMs

wer	train_100h			train_myhexin_20161019		
	test_myhexin_20161019	test_1000j u	test_2000j u	test_myhexin_20161019	test_1000j u	test_2000j u
lm_default	50.65	80.74	83.55	38.86	89.71	91.39
lm.3gram.1e-4					89.71	91.38
lm.3gram.1e-5						
lm.3gram.1e-6						
lm.4gram.1e-4						

# Dictionary check

- Check alphabetic dictionary with 20000 entries.
- 45% of the dictionary check is finished.

# Work in the future

- Finish the LM comparison and dictionary check.
- Do other jobs Mengyuan assigns to me.

Thank you