

# AUTOMATIC SPEECH RECOGNITION FOR CODE-MIXED SINGAPOREAN LANGUAGES

One system that recognizes a mix of two languages\* at the same time!

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## Using two languages in one sentence not necessarily bad: Study

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Published 21 AUGUST, 2014 UPDATED 21 AUGUST, 2014



SINGAPORE — Although parents and teachers tend to frown upon children using a mix of both English and Mandarin while speaking, a study done on pre-schoolers here has found that such a habit does not necessarily reflect a weaker command of either language.

On the contrary, the study — which saw the participation of 51 pre-schoolers aged between five-and-a-half and six-and-a-half years old — found that children switch between these languages because they have the linguistic capacity to do so. In fact, those who switch between English and Mandarin more frequently were found to have a better command of the latter language.

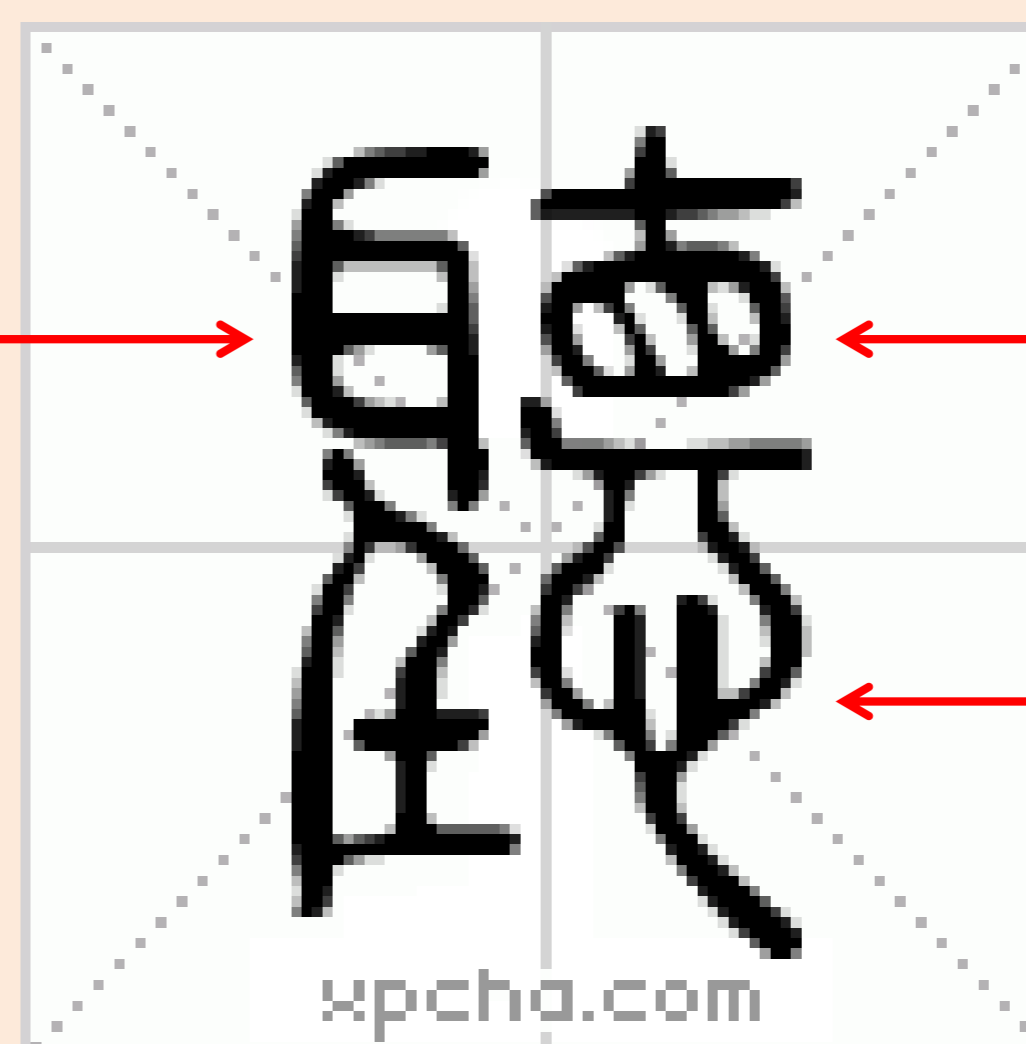
他不喜歡重复自己，  
creative 一点会比较好！

我们 always makan  
at kopitiam one!



Acoustic  
Modeling  
(the ear)

Speech  
Acquisition  
(attention)



Language  
modeling  
(the heart)

Chinese character 'to listen'

## Technologies

- ❖ Code-switching speech recognition
- ❖ Bilingual acoustic modeling
- ❖ Bilingual language modeling
- ❖ Bilingual phonetic lexicography

## Applications

- ❖ Voice-automated call centre
- ❖ Automatic meeting minuting
- ❖ Live speech transcription
- ❖ Personal assistants
- ❖ Computer-aided language learning

AI SPEECH LAB

**Team:** Li Haizhou, Emre Yilmaz, Wang Qinyi

\* Lyu et al, SEAME: a Mandarin-English code-switching speech corpus in South-East Asia, INTERSPEECH 2010