



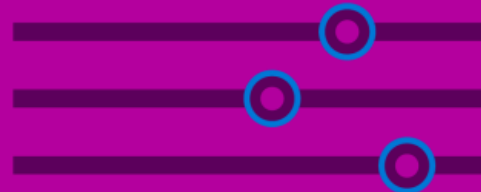
#FusionAIDay

#FusionAIDay



LANGUAGE SERVICES

Frances Tibble, @frances_tibble





Vision



Language



Speech



Search



Knowledge

Computer vision
Face
Emotion
Content Moderator
Video
Video Indexer

Custom

Vision Service

Text analytics
Spell check
Web language model
Linguistic analysis
Translator Text

Custom

Language
Understanding

Translator Speech
Speaker recognition
Bing Speech

Custom

Speech Service

Web search
Image search
Video search
News search
Autosuggest
Entity search

Custom

Search

Academic knowledge
Entity linking service
Knowledge exploration
Recommendations
QnA maker

Custom

Decision Service

+6 Cognitive Services Labs APIs

30+ APIS



VIRGIN FUN BUS



Text Analytics

Spell Check

Web Language Model

Linguistic Analysis

Translator Text

Custom Language Understanding

APIs TO PROCESS NATURAL LANGUAGE AND ANALYSE TEXT

LANGUAGE



TEXT ANALYTICS



- ▶ Sentiment analysis
- ▶ Key phrase extraction
- ▶ Language detection





A new service from microso ft!

Microsoft



Director stephen
Spielberg should use
in the next AI movie!

Steven



I'm gona use this today!

gonna



Our engineers developed
this four you ! for



Our service is like lyft
for word processing!

Lyft

SPELL CHECK

WEB LANGUAGE MODEL



- ▶ Joint probabilities
- ▶ Conditional probabilities
- ▶ Next word completions

 $P=-6.81$
natural language processing

 $P=-0.50$
natural language \propto *processing*

natural language \rightarrow *processing*
 *speech*
find
...

TRANSLATOR TEXT



- ▶ Extend the reach of your apps
- ▶ Automatically detect languages
- ▶ Build custom translation systems



No SIM

10:36 AM

100%

< Leave

KCWEH



You are now muted

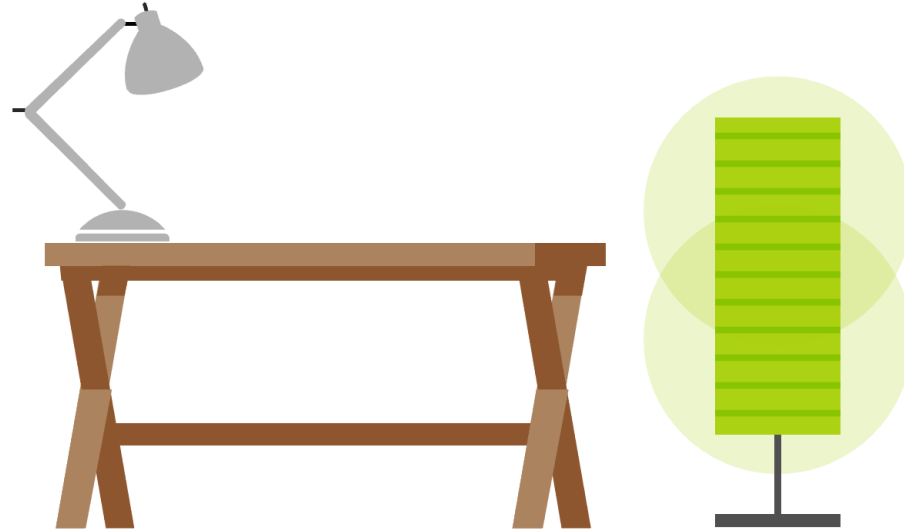
Hey Harry Shum, welcome to the conversation! Tap the conversation code above at any time to invite more people.

Conversation bot



Conversation is locked





LANGUAGE UNDERSTANDING



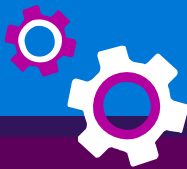
BUILDING WITH LUIS



#FusionAIDay



KEY CONCEPTS

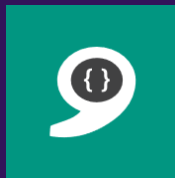


- ▶ Utterance
- ▶ Intent
- ▶ Entity





1) User makes an 'utterance'



2) LUIS figures out Intent and Entities

Intent: *Do an Event Search*

Genre

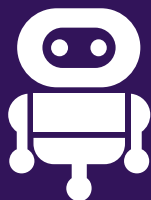
ArtistType

**“I’m looking for a rock band in
Birmingham on Saturday night”**

Location

DateTime (date)

DateTime (time)



3) App receives intent and entities from LUIS and performs appropriate action

DEMO

LAB

#FusionAIDay



CONTACT ME

FRANCES TIBBLE

 @frances_tibble

Frances.Tibble@Microsoft.com

