Computational Linguistics

Main Goals

Model and Map Natural Languages

Natural Language Processing (NLP)

Speech Synthesis

ଔ Vocoder and <u>Voder</u> (1939)

ଔ Now can be done reasonably well in the browser!

ଓ window.speechSynthesis.speak(new SpeechSynthesisUtterance("she saw me"));

ଔ <u>Impersonation</u>

ଔ Challenges

ଓ Homographs, emphasis, new phonemes, context, objective evaluation

Speech Recognition

ود Advanced through machine learning

ود It's a classification problem

Grammars

 Break down language into its recognizable component parts

 Create a "tree" of language

 Plenty of examples

  http://tomato.banatao.berkeley.edu:8080/parser/parser.html

 Can be run in reverse to generate language (naively)

  https://www.poem-generator.org.uk/

Language Understanding

 AI-hard
   We get this, we can get anything
 May not even be measurable
   What is "understanding"?
   Turing Test
   Watson
   Chinese Room