# Coreference Resolution

## **Tools**

#### Illinois

Link: <a href="https://cogcomp.cs.illinois.edu/page/software\_view/Coref">https://cogcomp.cs.illinois.edu/page/software\_view/Coref</a>

#### **Stanford**

Link: <a href="http://nlp.stanford.edu/projects/coref.shtml">http://nlp.stanford.edu/projects/coref.shtml</a>

#### **Berkeley**

Link: <a href="http://nlp.cs.berkeley.edu/projects/coref.shtml">http://nlp.cs.berkeley.edu/projects/coref.shtml</a>

## **Evaluation**

http://aclweb.org/anthology/W10-4305.pdf

## Illinois CCG

#### Only supports English

#### Reference:

A Joint Framework for Coreference Resolution and Mention Head Detection H. Peng and K. Chang and D. Roth CoNLLUniversity of Illinois at Urbana-Champaign - 2015

A Constrained Latent Variable Model for Coreference Resolution K.-W. Chang and R. Samdani and D. Roth *EMNLP - 2013* 

Illinois-Coref: The UI System in the CoNLL-2012 Shared Task K.-W. Chang and R. Samdani and A. Rozovskaya and M. Sammons and D. Roth CoNLL Shared Task - 2012

Inference Protocols for Coreference Resolution K.-W. Chang and R. Samdani and A. Rozovskaya and N. Rizzolo and M. Sammons and D. Roth CoNLL Shared Task - 2011

Understanding the Value of Features for Coreference Resolution E. Bengtson and D. Roth *EMNLP - 2008* 

## Sample Text

Helicopters patrol the temporary no-fly zone around New Jersey's MetLife Stadium Sunday, with F-16s based in Atlantic City ready to be scrambled if an unauthorized aircraft does enter the restricted airspace. Down below, bomb-sniffing dogs will patrol the trains and buses that are expected to take approximately 30,000 of the 80,000-plus spectators to Sunday's Super Bowl between the Denver Broncos and Seattle Seahawks. The Transportation Security Administration said it has added about two dozen dogs to monitor passengers coming in and out of the airport around the Super Bowl. On Saturday, TSA agents demonstrated how the dogs can sniff out many different types of explosives. Once they do, they're trained to sit rather than attack, so as not to raise suspicion or create a panic. TSA spokeswoman Lisa Farbstein said the dogs undergo 12 weeks of training, which costs about \$200,000, factoring in food, vehicles and salaries for trainers. Dogs have been used in cargo areas for some time, but have just been introduced recently in passenger areas at Newark and JFK airports. JFK has one dog and Newark has a handful, Farbstein said

#### **Mentions**

[ Helicopters ] patrol the temporary nofly zone around [ New Jersey ] 's MetLife Stadium Sunday ] ] . with [F16s based] in [Atlantic City] ready to be scrambled if [an unauthorized aircraft] does enter [the restricted airspace ]. Down below, [bombsniffing dogs] will [patrol [the trains] and buses that are expected to take approximately 30,000 of [the 80,000plus spectators] to Sunday 's Super Bowl between [ the Denver Broncos ] and [ Seattle Seahawks ] ] . [ The Transportation Security Administration ] said [ it ] has added about two dozen dogs to monitor [passengers] coming in and out of [the airport around the Super Bowl ]. On Saturday, [ TSA ] agents ] demonstrated how [ the dogs ] can sniff out many different types of [explosives]. Once [they] do, [they] re trained to sit rather than attack, so as not to raise suspicion or create a panic . [ [ TSA ]spokeswoman ] Lisa Farbstein ] said [ the dogs ] undergo 12 weeks of training, [which] costs about 200,000, factoring in food, [vehicles] and salaries for [trainers]. Dogs | have | been used in cargo areas for some time | , but have just been | introduced recently in | passenger ] areas at [ Newark ] and [ [ JFK ] airports ] ] . [ JFK ] has one [ dog ] and [ Newark ] has a handful, [Farbstein] said.

## Stanford coreNLP

http://stanfordnlp.github.io/CoreNLP/coref.html

Pro:

- 1. supports Chinese and English
- 2. Good documentation and examples