



Bootstrapping Large Scale Polarity Lexicons through Advanced Distributional Methods

Giuseppe Castellucci, Danilo Croce, Roberto Basili University of Roma, Tor Vergata, Italy September 23, 2015 14th Conference of the Italian Association for Artificial Intelligence



- Sentiment Analysis and DMs
 - Polarized words share contexts
 \rightarrow similar vectors



The Polarity Lexicon Solution

Polarity Lexicon are valuable resources used in SA

- mainly hand-coded
- Associate pc
 - good
 - wonderful
 - WOW
 - omg



The Polarity Lexicon Solution

Sentiment of words can be domain dependent

"The screen of this phone is dazzling at the sunlight!"

"The road handling of Alfa Romeo cars is dazzling"

- Hand-coded sentiment lexicons suffer
 - domain changes
 - Ianguage changes
- Expensive manual revisions are needed





In This Paper

Exploit characteristics of DM

- to distinguish between opposite polarity words in DMs
- project sentences and words in a common space
- transfer the polarity from sentences to words, i.e. acquire a polarity lexicon by learning a classifier

An unsupervised procedure

- domain independent and
- Ianguage independent



Distributional Polarity Lexicon

Term	positivity	negativity	neutrality
good	0.73	0.12	0.15
WOW	0.53	0.28	0.19
OMG	0.18	0.54	0.28
suffer	0.06	0.67	0.27
#apple	0.14	0.16	0.70
article	0.16	0.09	0.75
wonderful	0.77	0.09	0.14
ferrari	0.24	0.23	0.53
appreciate	0.84	0.07	0.09
depression	0.15	0.40	0.45
not	0.20	0.69	0.11
hate	0.08	0.85	0.07
damned	0.36	0.41	0.23

*http://sag.art.uniroma2.it/demo-software/distributional-polarity-lexicon/



••

See you at the table!