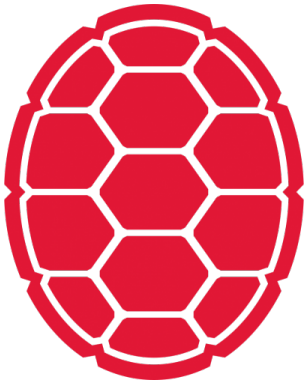

Representation Learning

Machine Learning: Jordan Boyd-Graber
University of Maryland
SLIDES ADAPTED FROM YOAV GOLDBERG AND OMER LEVY

Word Representation

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- Distributional Hypothesis (Harris, 1954; Firth, 1957)
- Know the word by the company it keeps

Intuition (from Boroni)

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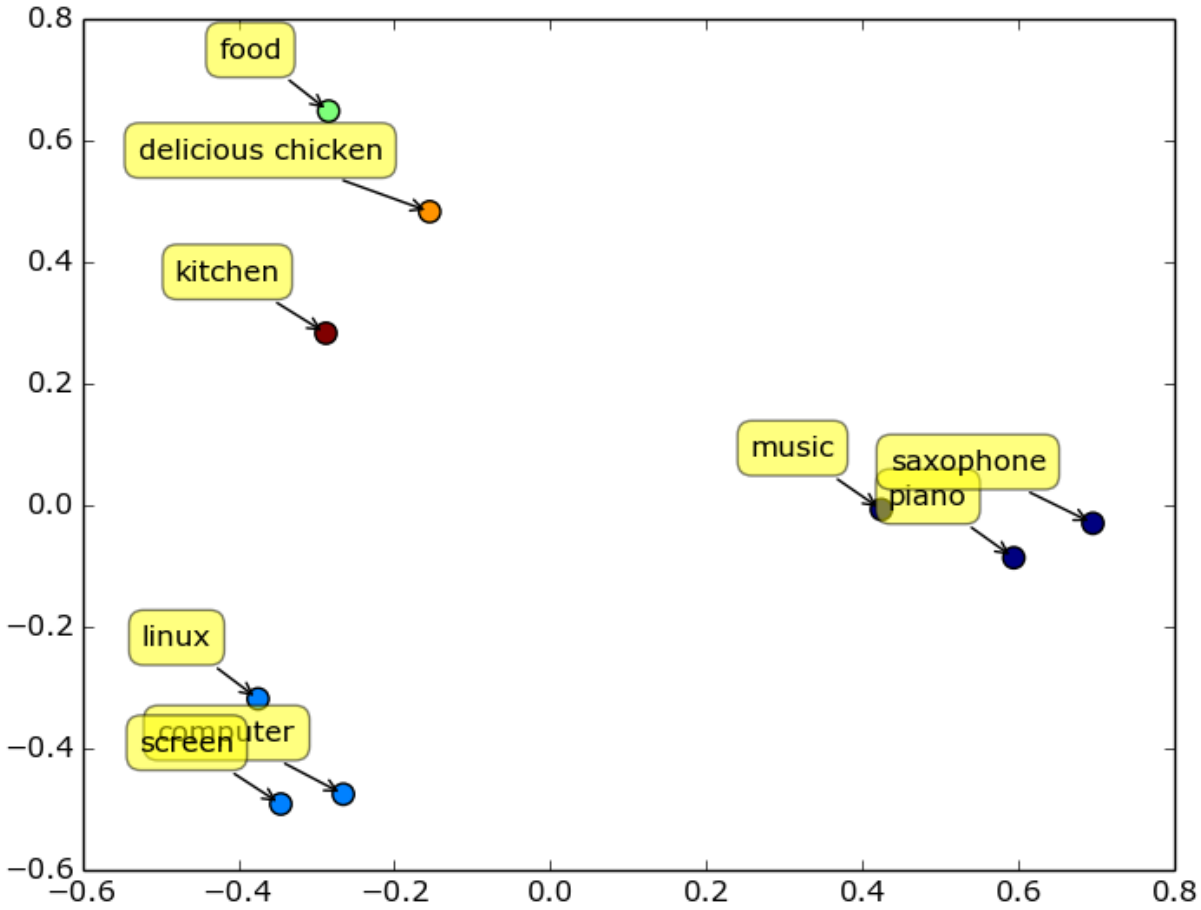
Representation



Usefulness

- Multimodal
- Multilingual
- Useful downstream feature

From Distributional to Distributed Semantics

The new kid on the block

- Deep learning / neural networks
- "Distributed" word representations
  - Feed text into neural-net. Get back "word embeddings".
  - Each word is represented as a low-dimensional vector.
  - Vectors capture "semantics"
- `word2vec` (Mikolov et al)