

Header: /cvsroot/latex-beamer/latex-  
beamer/themes/outer/beamerouterthemedefault.sty,v 1.14  
2007/01/28 20:48:30 tantau Exp



AGH UNIVERSITY OF SCIENCE  
AND TECHNOLOGY

# Seminar in *Artificial Intelligence*

## Word embeddings

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# Agenda

- 1 **Introduction**
  - Subtopic 1
  - Subtopic 2

# What is word embedding?

What a **lovely** day.  
What a **nice** day.

What =  $[1, 0, 0, 0, 0]$

a =  $[0, 1, 0, 0, 0]$

lovely =  $[0, 0, 1, 0, 0]$

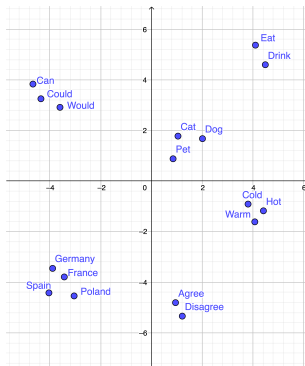
nice =  $[0, 0, 0, 1, 0]$

day =  $[0, 0, 0, 0, 1]$

## How can we use it?

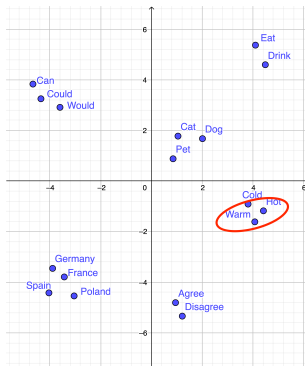
- If user search for "Dell notebook battery size" we would like to match it also with "Dell laptop battery capacity"
- If user search for "Cracow Motel" we would like to match it also with "Krakow Hotel"

# Word Embedding



Caption of the figure

# Word Embedding



Words are synonyms



# Word Embedding



Words are antonyms

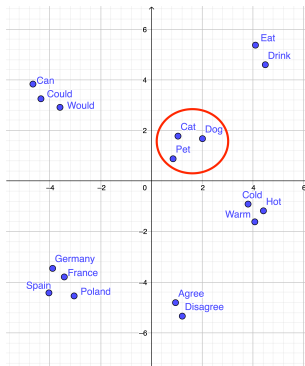
# Word Embedding

Slide with a Figure from a File



Words are value on a scale

# Word Embedding



Words are hyponym - hypernym

# Word Embedding



Words appear in similar context

# Title of the Slide

Subtitle of the Slide: Use Only if Necessary...

- Bullet point 1.
- Bullet point 2 -e- you can emphasise a text.

# Title of the Slide

Slide without Bullets

Text:

Blocks are good for important notions.

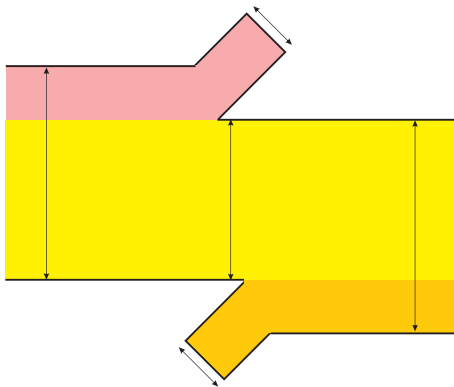
Alertblocks are even better to catch the attention.

## Title

You can have the title in the (alert)block.

# Title of the Slide

Slide with a Figure from a File

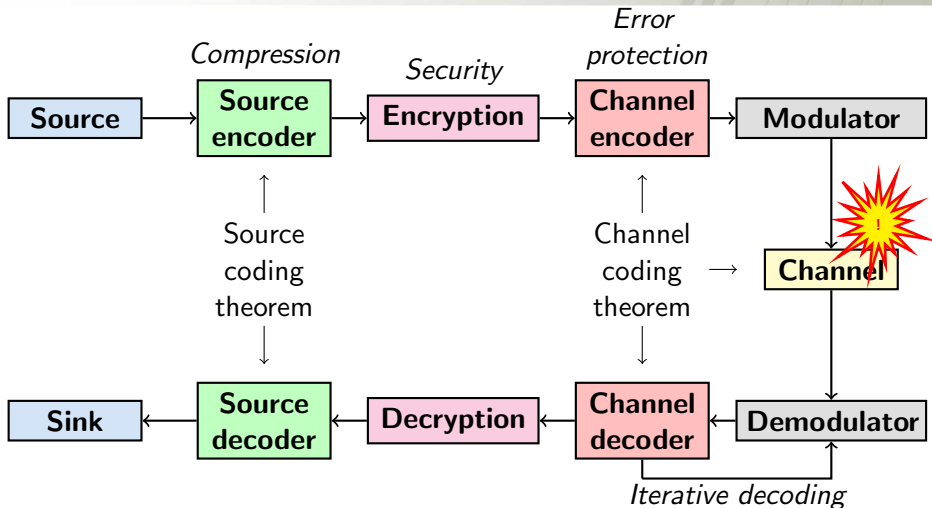


**Figure:** Caption of the figure

I am sorry that the example figures and the table concern the information theory ☺

# Title of the Slide

Slide with a Figure Drawn with tikz



Source: Todd K. Moon. *Error Correction Coding*.  
John Wiley & Sons, Inc., Hoboken, NJ, 2005.



# Title of the Slide

## Slide with a Table

**Table:** Caption of the Table

Data	Entropy
Plain text	4.347
Native executables	5.099
Packed executables	6.801
Encrypted executables	7.175

Source: Robert Lyda and James Hamrock. [Using Entropy Analysis to Find Encrypted and Packed Malware](#). *IEEE Security & Privacy*, 5(2):40–45, March/April 2007.

**Thank you for your  
attention!**

# Q & A

