

## Overview

- search information retrieval
  - represent documents as [[Vectors as KR]]
  - assess its relevance (similarity)
  - ranking

## Representing Documents as Vector

- vector represents content
  - disregards metadata (mostly)
- vector elements correspond to content elements
  - words
  - word stems
  - concepts
  - phrases
- dictionary vector
  - contains all selected content elements from documents and query
  - each element has index
  - decides which elements are relevant
    - \* each vector element represents a different topic
    - \* each document has value corresponding to each topic
      - ◆ different ways to generate this value
      - ◆ e.g. [[TFIDF]]
  - hides some words with [[Natural Language Processing]]
  - weird example

Query  $q$  = „festival in Graz“

Document  $d_1$  = „*The Elevate festival in Graz is a highly visible, public event that draws international audience.*“

Document  $d_2$  = „*All festivals in Austria, have been cancelled due to the ongoing CoVid-19 situation. This regulation of course also applies to Graz. It is currently not foreseeable when public festivals will be able to take place again.*“

The dictionary vector to the right already “hides” a few choices in which words to choose and which not. Can you spot them?

➤ Natural language processing

*festival  
graz  
elevate  
highly  
visible  
public  
event  
draws  
international  
audience  
Austria  
cancelled  
ongoing  
CoVid – 19  
situation  
regulation  
applies  
foreseeable  
take  
place  
again*

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[[Information Retrieval]]