EPITECH.
PARIS GRADUATE SCHOOL OF DIGITAL INNOVATION

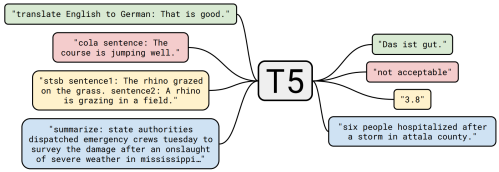
Travel Order Resolver

Kick-off

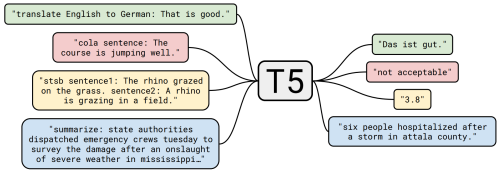
T9 - Artificial Intelligence

T-AIA-901

Natural language processing

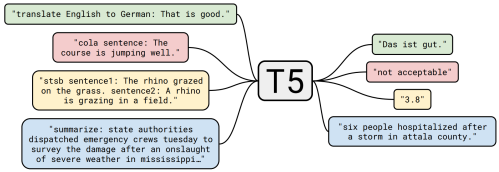


Natural language processing



Very active field in research for decades

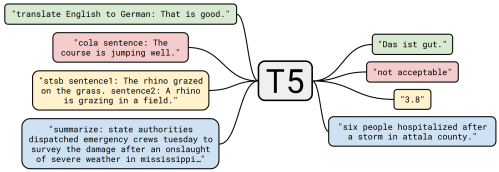
Natural language processing



Very active field in research for decades

Started with **translation** and **classification**

Natural language processing

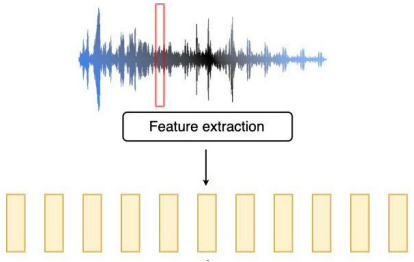


Very active field in research for decades

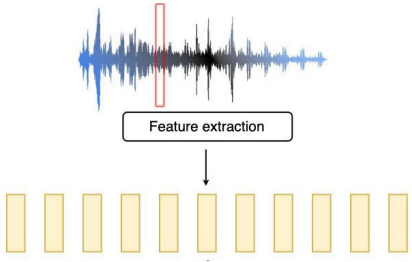
Started with **translation** and **classification**

Nowadays, **automation** of commands is common in every sector

Signal detection

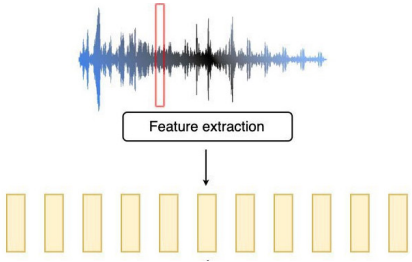


Signal detection



From analog signal to text

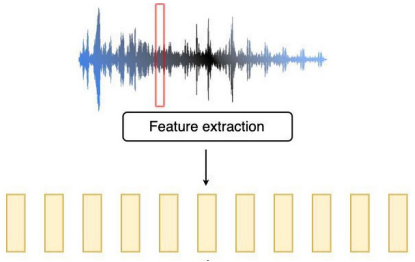
Signal detection



From analog signal to text

Detection of a word depends on previous sounds

Signal detection

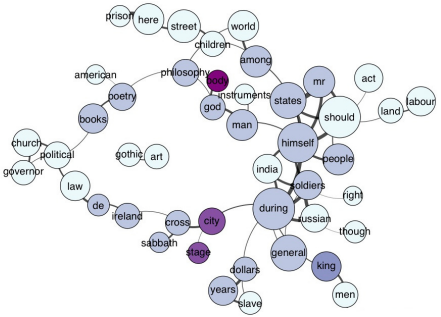


From analog signal to text

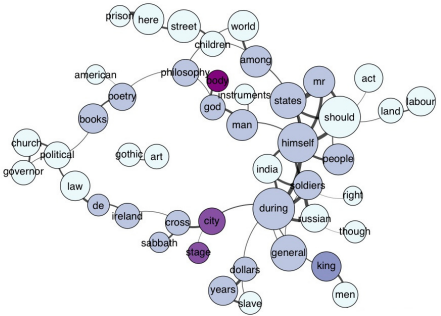
Detection of a word depends on previous sounds

Use **Markov models** or **recurrent networks**

From text to math object

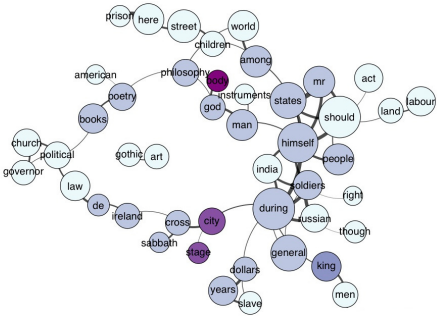


From text to math object



Build vectors in the vocabulary space

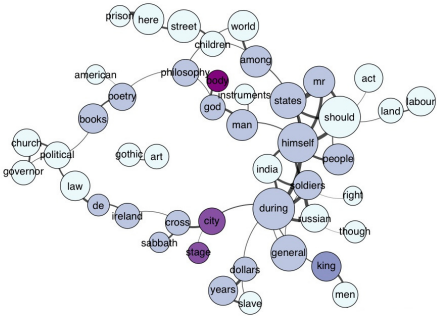
From text to math object



Build vectors in the vocabulary space

Elaborate **syntax trees**

From text to math object

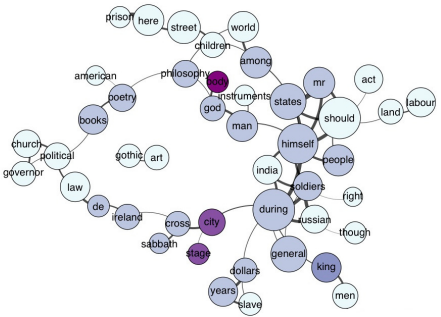


Build vectors in the vocabulary space

Elaborate **syntax trees**

Keep **bags of words**

From text to math object



Build vectors in the vocabulary space

Elaborate **syntax trees**

Keep **bags of words**

Identify **topics**

Classification

Classification

Separate data along word distribution

Classification

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Train your algorithm on a sample

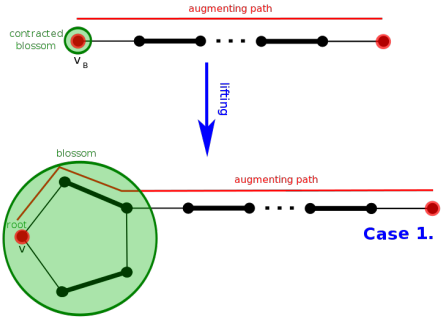
Classification

Separate data along word distribution

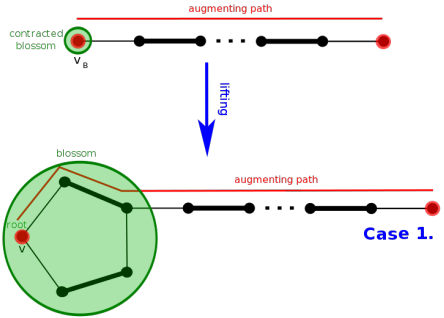
Train your algorithm on a sample

Test **accuracy** and **other metrics**

Optimization

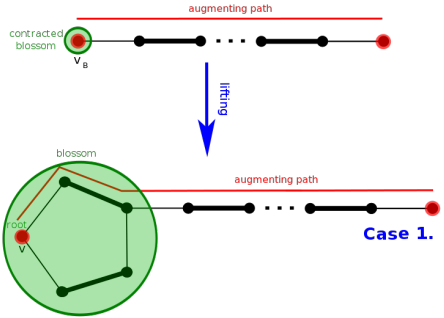


Optimization



Organize tabular data into a **network**

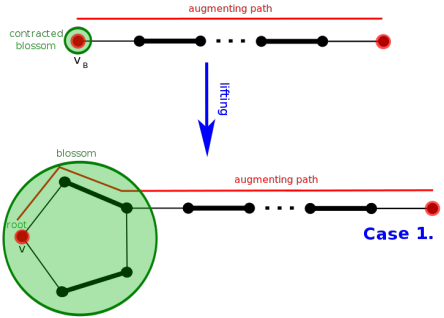
Optimization



Organize tabular data into a **network**

Beware of **computational complexity**

Optimization

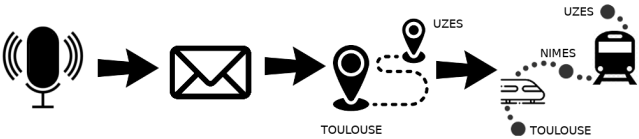


Organize tabular data into a **network**

Beware of **computational complexity**

Find the **shortest path**

Back to the project



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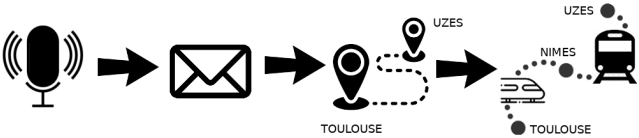
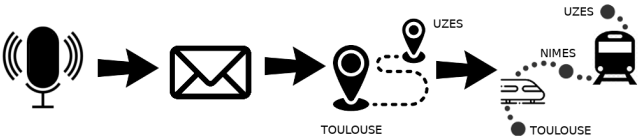


Given a bunch of texts or voice records:

Back to the project



Given a bunch of texts or voice records:
-> separate real **orders** from spam

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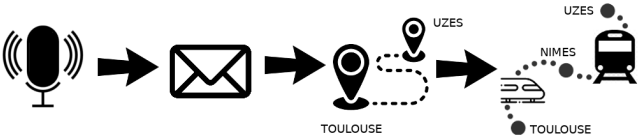

Given a bunch of texts or voice records:
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-> **identify** the expected destinations

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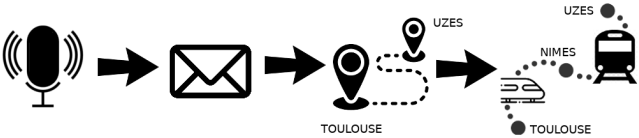

Given a bunch of texts or voice records:
-> separate real **orders** from spam
-> **identify** the expected destinations
-> build **optimal** travel routes

Any questions

?