

Text tokenizers for NLP

Bauke Brenninkmeijer

Goal

Showcase the silent revolution of text tokenizers

whois: **Bauke Brenninkmeijer**

- MSc in CS and Data Science @Nijmegen
- Data Scientist @ABNAMRO since 2019
 - 1.5 years in Data Management
 - ~1 years in Global Markets
- Co-founder of DSFC
-  [@baukebrenninkmeijer](https://github.com/baukebrenninkmeijer)

But why? What do you do with tokenizers?

During my work: nothing, unfortunately.

Outside of work: currently, also nothing.

But I'm a curious person. And I worked with NLP before but never really dove deep into tokenizers.

Disclaimer

In an attempt to protect myself from looking foolish,
I will limit the scope of this talk to english.

Asian languages like Chinese often require different
approaches of which I know nothing.

**Now I will bestow my
knowledge upon thee**

Tokenization [1/2]

- Required for using text in any NLP techniques.
- Chops a text into smaller units called **tokens**.
- Tokens can represent many different things, such as
 - words
 - parts of words
 - characters.

Tokenization [2/2]

- Form the building blocks of any NLP model
- Tokens are mapped to an ID
- Models ingest these IDs, since they can only use numeric values.

Definitions

- **Corpus:** Textual dataset
- **Token:** Part of a text, used as input for models.
- **ID:** an index (i.e. a unique integer) that maps to a token.

Types of tokenizer

- word-based

`'tokenizer'`

- character based

`'t', 'o', 'k', 'e', 'n', 'i', 'z', 'e', 'r'`

- subword-based

`'token', 'izer'`

NLP Evolution



Where are the tokenizers?

NLP Evolution

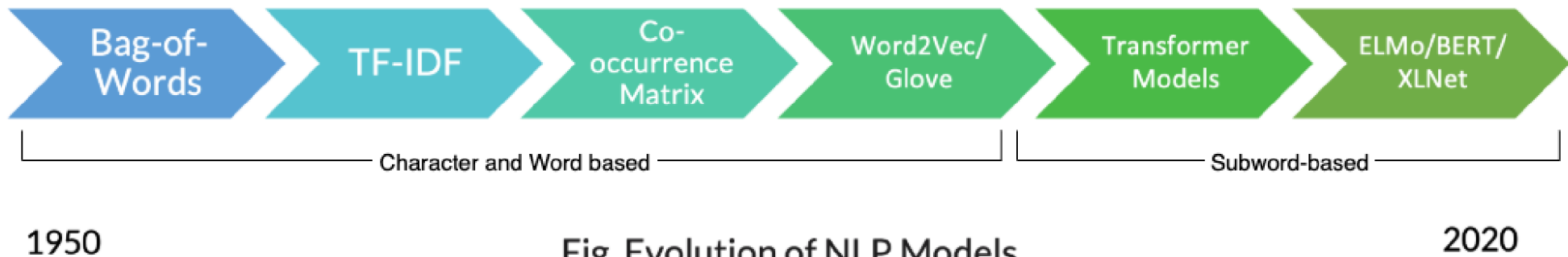


Fig. Evolution of NLP Models

On to the interactive slides!

My slides

- Created with **MARP** in Markdown
- Created with **RISE** in jupyter notebook

Questions?