# The ABC of Computational Text Analysis

## #10 NLP with Python

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# Recap last Lecture

## introduce Python 🐍

- JupyterLab editor
- syntax
- data types

# Outline

- organizational

  *evaluation, mini-project, assignment #3*

- Let's getting to serious NLP! ✨
- interactive coding

  *interrupt, ask, complement*

# Organizational

# Course Evaluation

# Tell me... 

## Please follow the link in the email

- by the University of Lucerne, Faculty of Humanities and Social Sciences
- received on 3 May 2020 (or similar)

Thanks for any constructive feedback,
be it sweet or sour!

# Assignment #3 ✍️

- get/submit via OLAT
  *starting tomorrow*
  *deadline 14 May 2021, 23:59*
- use forum on OLAT
  *subscribe to get notifications*
- ask friends for support, not solutions

# Requirements Mini-Project

present project on 27 May 2021

- executable script
- multiple documents
- compare …
  *historically*
  *across actors*
- quantitative measures + interpretation

! share your project idea here by 14 May 2021

# Optional Seminar Paper

- writing a seminar paper (6 ECTS)
- get in touch to discuss your idea


A Primer on
old school NLP

# What is a Word?

- word ~ segments between whitespace
- yet, there are …

  *contractions:* `U.S.`, `don't`

  *collocations:* `New York`

# Token

- token ~ computational unit

  *representation of words*

- lemma ~ base form of a word

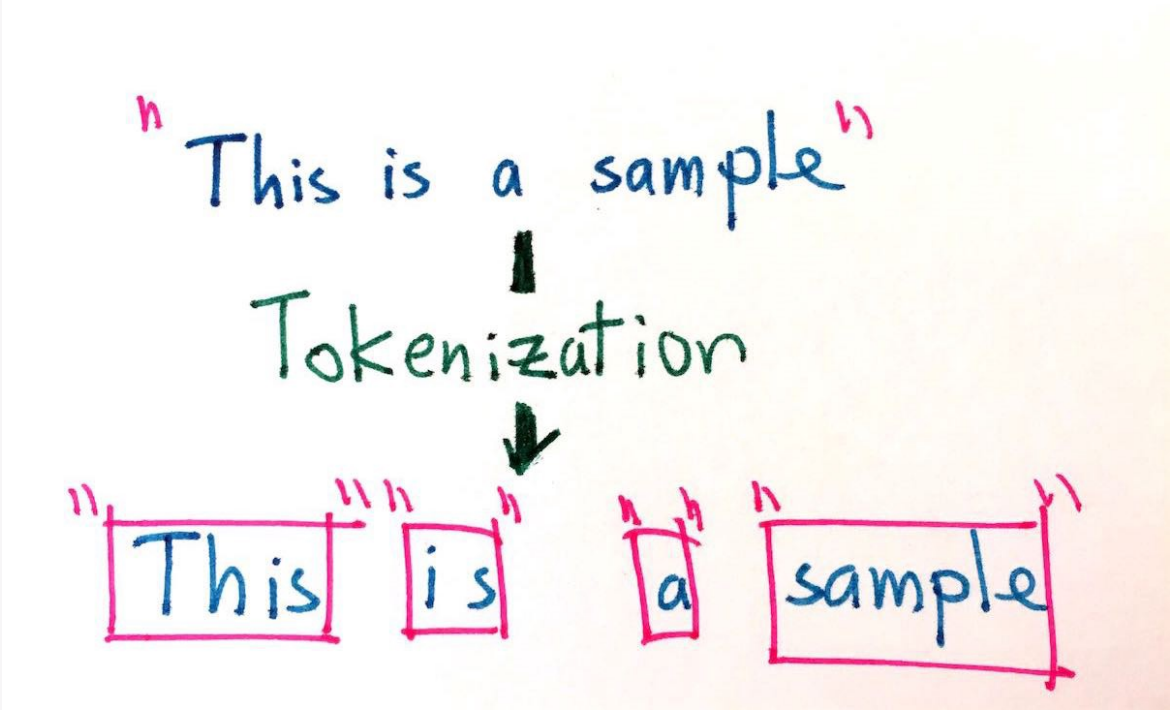
  `texts` → `text`

  `goes` → `go`

- stop words ~ functional words

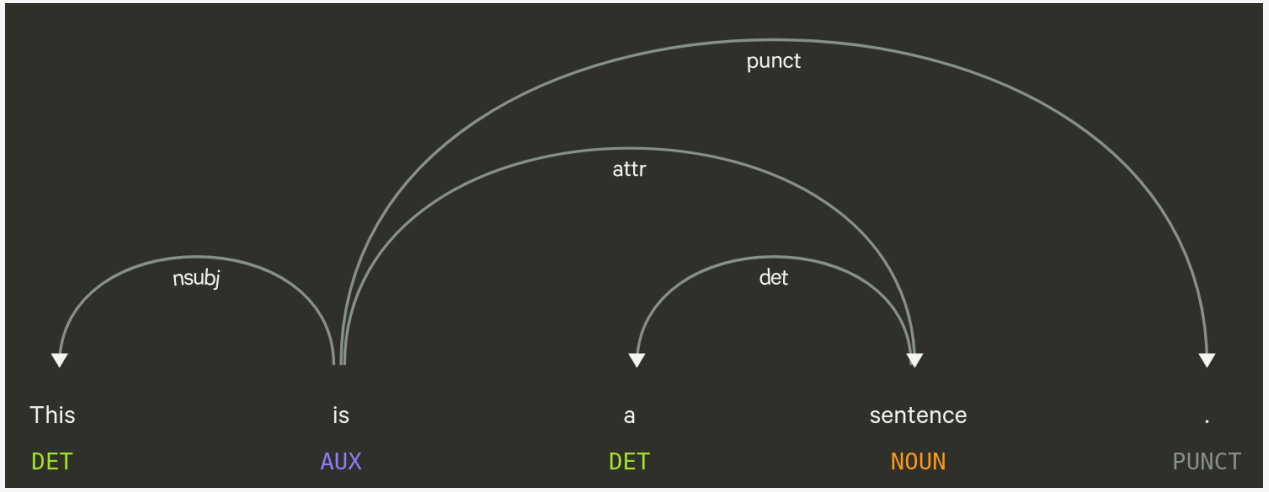
  *lacking deeper meaning*

  `the`, `a`, `on`, `and` ...




*tokenization (Medium)*

# NLP Processing Steps



# Outlook: NLP is on Fire 🔥

- supervised machine learning
- you can do basically anything with modern NLP

  *train on human-annotated data*

- effort, insights and quality may differ

  *for better or worse*

# Deep Dive into NLP for Social Science

- check code on GitHub
- run code on Binder 

# Resources

tutorials on spaCy

- official spaCy 101
- official online course spaCy
- Hitchhiker's Guide to NLP in spaCy


Questions?

# References

Jurafsky, Dan, and James H. Martin. forthcoming. *Speech and Language Processing*. 3rd (Draft of December 30, 2020). London: Prentice Hall. https://web.stanford.edu/~jurafsky/slp3/.