

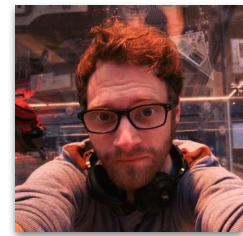
# Deep Learning & Digital Humanities

## Kickoff



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Dr. Steffen Eger\*  
Thomas Haider, M.A.\*\*



- \* Natural Language Learning Group
- \*\* Max Planck Institute for Empirical Aesthetics
- \*\* IMS, University of Stuttgart



Max-Planck-Institut  
für empirische Ästhetik



University of Stuttgart  
Germany

# Agenda



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- Our backgrounds
- Seminar goals
- Organization
  - Presentation
  - Jury
  - Term paper
  - Your grade
- Seminar topics & schedule
- Important links

# Our backgrounds

## Steffen Eger

- PhD in economics
- PostDocs in NLP 2014-2016, 2016-2018
- Independent Research Group Leader  
("Nachwuchsgruppenleiter") since 2019
- Interested in Deep Learning for NLP
  - Humanities applications like poetry generation + semantic change
  - Also cross-linguality & representation learning

Steffen Eger

- Teaching

Deep Learning for Natural Language Processing (each SS)

[https://www.informatik.tu-darmstadt.de/ukp/teaching\\_ukp/courses\\_3/previous\\_terms/sose\\_2019/deep\\_learning\\_for\\_natural\\_language\\_processing\\_2/inhalt\\_mit\\_marginalienspalte\\_75.en.jsp](https://www.informatik.tu-darmstadt.de/ukp/teaching_ukp/courses_3/previous_terms/sose_2019/deep_learning_for_natural_language_processing_2/inhalt_mit_marginalienspalte_75.en.jsp)

- Links

- IRG [https://www.informatik.tu-darmstadt.de/aiphes/aiphes/irg\\_position/index.de.jsp](https://www.informatik.tu-darmstadt.de/aiphes/aiphes/irg_position/index.de.jsp)

**(theses available)**

- Website

[https://www.informatik.tu-darmstadt.de/aiphes/aiphes/people\\_7/mitarbeiter\\_4\\_detailseite\\_72000.en.jsp](https://www.informatik.tu-darmstadt.de/aiphes/aiphes/people_7/mitarbeiter_4_detailseite_72000.en.jsp)

# Seminar goals

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The focus of the seminar is on **humanities applications** like *poetry generation and analysis, metaphor and emotion identification, etc.*, and how to **solve these problems with Deep Learning**. *Students will read papers and present them during the seminar.*

# Seminar goals

- The seminar is not an introduction to Deep Learning
- We will also not cover any programming for Deep Learning
- If you lack skills in Deep Learning, you need to be able to acquire them yourselves, mostly
  - at least the basics
- Caution: DL requires understanding of math (at least a little) and programming (at least a little)



The seminar takes places

- Thursdays from 18:15 to 19:45
- About twice per month
- In S1|08 18
- Find the exact schedule here:
  - <https://github.com/SteffenEger/dldh/blob/master/index.md>

To pass the course, you need to

## Session

1. Give a talk (15 mins)
  - a. Max 2 people per talk
  - b. Max 2 papers per talk
  - c. Papers will be given only after consultation with us
2. Ask questions as a jury member
  - a. Questions for each talk: understanding, like, dislike
  - b. 3 -- 5 jury members
3. Write a term paper
  - a. 4 -- 8 pages

TOPIC 1	TOPIC 2
Talk 1 (15 mins)	Talk 1 (15 mins)
Talk 2 (15 mins)	Talk 2 (15 mins)
Discussion	Discussion



To pass the course, you need to

- Give a talk (15 mins)
  - Inform your peers/us on time if you want to drop the seminar / talk
  - Prepare back-up slides

To pass the course, you need to

- Write a term paper
  - 4-8 pages
  - Either “**close reading**”:
    - Discuss 1-2 papers in depth
  - Or “**distant reading**”:
    - Give an overview of a topic, discuss 3-6 papers
  - **Discuss your topic with us before starting to write**
  - You may describe small-scale experiments
    - 2-3 pages
    - **Discuss with us**

## Plagiarism

- Will lead to failing the course
- Plus you will receive a “note” at TU Darmstadt



Source: [https://www.123rf.com/photo\\_36611606\\_bad-decision-red-rubber-stamp-over-a-white-background-.html](https://www.123rf.com/photo_36611606_bad-decision-red-rubber-stamp-over-a-white-background-.html)

## All of the following are considered plagiarism

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- failing to put a quotation in quotation marks
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not (see our section on "fair use" rules)

Source: <https://www.plagiarism.org/article/what-is-plagiarism>

## Your grade

- $70\% * \text{term\_paper} + 30\% * (\text{presentation} + \text{jury} + \text{attendance})$
- **Term paper** should be *clear, follow conventions of scientific articles, well organized, grammatically correct, etc.*
- **Presentation** should be *clear, interesting, entertaining, with pictures, etc.* Should be able to *answer* questions
- As a **jury** member, you should ask *meaningful questions*
- You should **attend** *regularly*

# How a talk should be structured



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1. Motivation (Research Question)
2. Method / Approach (Deep Learning?)
3. Resources / Data (Corpora?)
4. Experiments / Results
  - a. How useful are the results for the humanities?
  - b. How useful is the method for this problem?
  - c. If the method is not DL: How could it be modelled differently?
5. Conclusion / Summary

# Seminar schedule (tentative)



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Session	Date	Topics	Presenters
1	24.10.	DH	Thomas Haider
2	31.10.	DL	Steffen Eger
3	14.11.	Corpora & Annotation	
4	28.11.	Spelling Normalization & OCR	
5	12.12.	Metaphors & Emotions	
6	19.12.	Semantic Change & Drift	
7	16.01.	Stylometry & Variation	
8	<b>23.01.</b>	Fiction & Narration	
9	30.01.	Poetry & Arts	

## Moodle

- <https://moodle.informatik.tu-darmstadt.de/course/view.php?id=789>

## Seminar schedule

- <https://github.com/SteffenEger/dldh/blob/master/index.md>

## Email addresses

- [eger@aiphes.tu-darmstadt.de](mailto:eger@aiphes.tu-darmstadt.de)
- [thomas.haider@ae.mpg.de](mailto:thomas.haider@ae.mpg.de)
- Always contact both of us

## Deep Learning Courses

- DL4NLP2019 TUDA is on moodle
- Stanford DL4NLP: <http://web.stanford.edu/class/cs224n/>



# Useful links



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Template for term paper

- Will be provided

Template for presentation

- Will be provided

# Your todos

- Decide on a topic
- Register for the topic (link will be available tomorrow)
  - Until next Thursday
- Register for a jury membership
- If there are more participants than talks:
  - You will be in the queue
  - We will try to organize extra sessions. Possible topics:
    - Deep Learning Background
    - Fiction & Narration
    - Suggestions?



# THÄNK\$!