Research Group Social Computing
Department of Informatics
Technical University of Munich

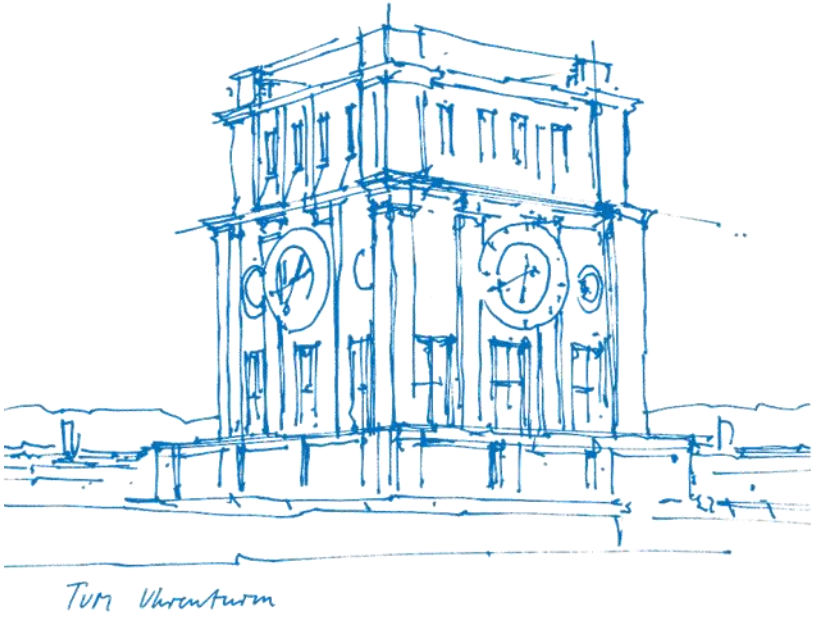
Preliminary Meeting of the NLP Lab Course WS2023

Master Lab Course - Machine Learning for Natural Language Processing Applications (IN2106, IN4249)

Miriam Anschütz, Tobias Eder,
Edoardo Mosca, Daryna Dementieva,
Jeremias Bohn, ..

Prof. Dr. Georg Groh

Research Group Social Computing, Department of Informatics,
Technical University of Munich



06.07.2023

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Outline

1. Requirements
2. Registration
3. Procedure
4. Projects
    - Ethical AI
    - Text simplification and summarization
    - Fake news detection

Requirements

Minimum:

- Master student in computer science, data engineering, or "alike"
- Good enough English skills
- Basic programming and machine learning knowledge

Important:

- Hands-on experience in Python, Pandas, Numpy, and SciPy
- Basic knowledge about artificial neural networks
- Basic knowledge about natural language processing

Optimal:

- Practical experience with Deep Learning frameworks, such as PyTorch, Tensorflow, Huggingface, etc.

Registration

- Until **19 July**, fill out the registration form

- Your entries are considered when ranking the interested students for the course.
- From **14** to **19 July**, you also have to register for the course on the matching system.
- Around the **28 July**, you are (probably) notified by the matching system about the status of participation.
- We will get in touch with you in August for the following steps.

Procedure

Project teams:

- You are going to work in teams of 2 or 3 people on one project topic.
- You can choose with whom to work with the project topic.
- Every project member has to report and work equally (no dirty business!).

Procedure:

- There will be one kickoff meeting at the beginning of the semester.
- There are going to be bi-weekly consulting and progress report sessions.
- You have to be part of a poster session and hand in a report at the end of the semester.

Everything else will be announced at the beginning of the semester.

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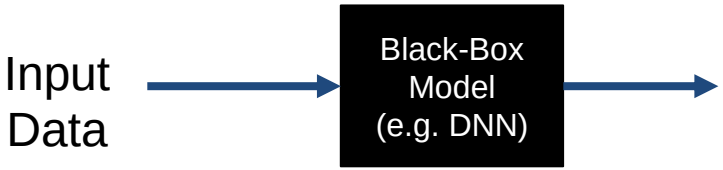
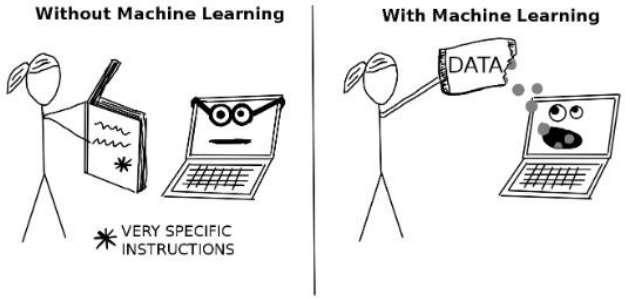
Projects– Explainable AI for Machine Learning

Simon Malberg, M.Sc.

Learning from data is powerful, but at what cost?





- Models are harder to debug and comprehend
- Models can be biased and unfair
- Models are less accepted by society
- Models can't be deployed in high-stake scenarios

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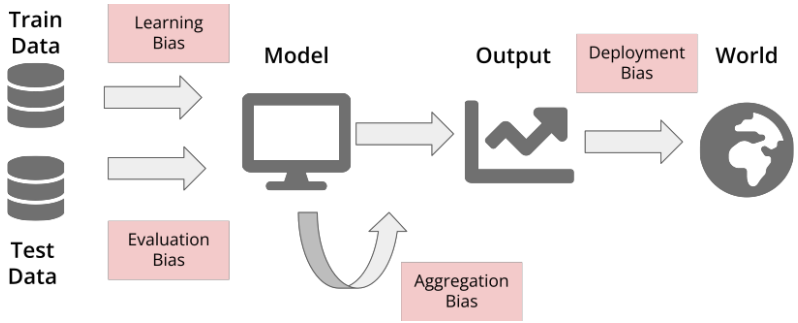
Projects– Ethical AI and Natural Legal Language Processing

Tobias Eder, M.Sc.



- NLP models can be used in a myriad of use-cases
- We experiment with different use cases of NLP that focus on large textual data analysis, multi-modal sentiment and emotion recognition or legal argument mining
- Apart from the technical challenges of implementing these systems we also look at issues of data bias and fairness

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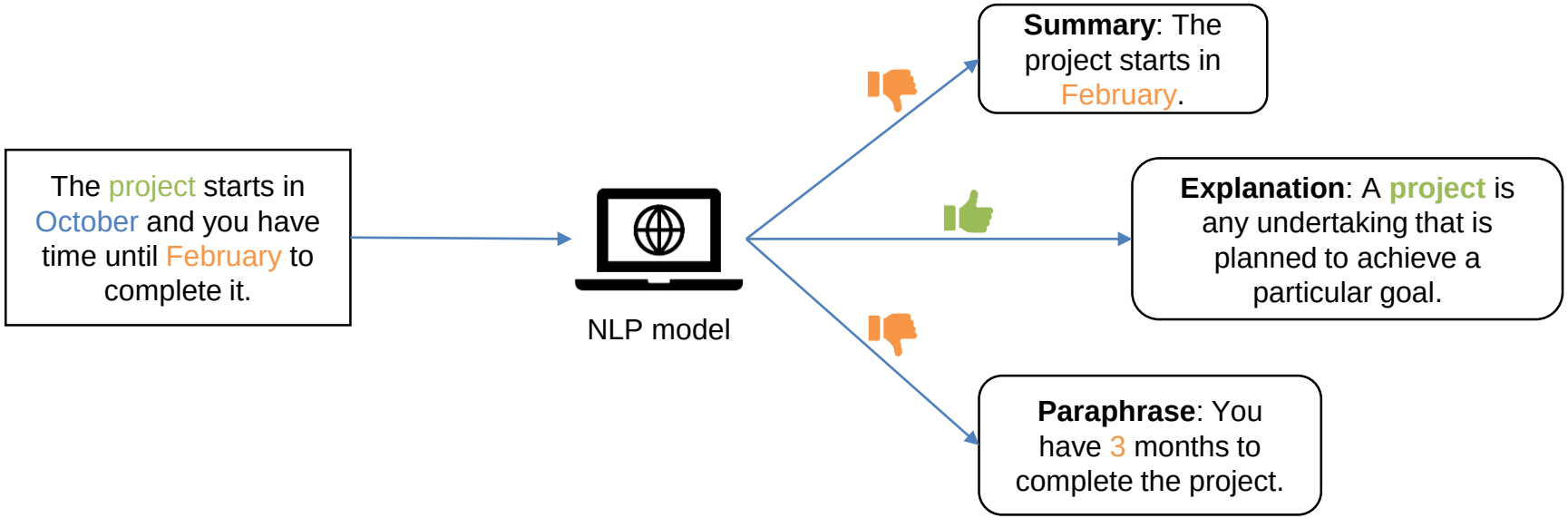
Projects – Evaluating correctness of generated text

Miriam Anschütz, M.Sc.



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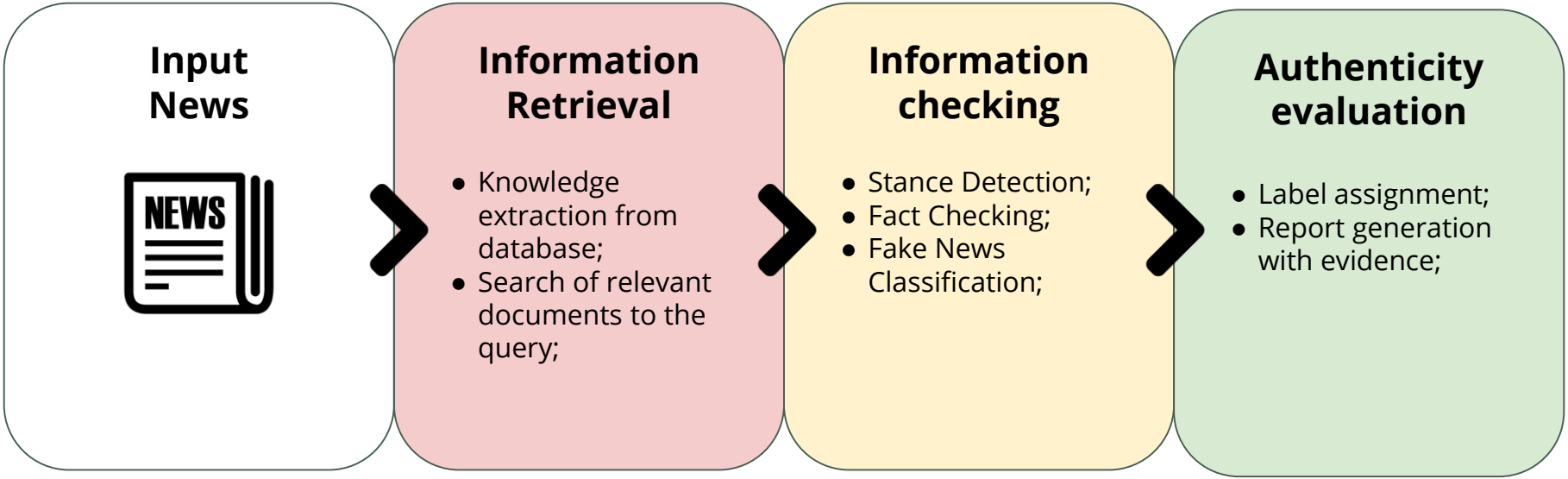
Projects– Fake news detection

Daryna Dementieva, M.Sc.



Questions?

Registration form: