

CT5121 - Advanced Topics in Natural Language Processing

Lecturers

- Dr. John P. McCrae

Lab Tutor

- Hossein Khaleghy
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Lecture Plan

1. Machine Learning for NLP
- 2.

You choose!

You choose?!

At the end of each week we will have a poll for the next topic and we will proceed with one of these topics.

These topics are in 4 thematic areas: Neural Networks, NLP Techniques, Multi-lingual/modal NLP and Applications

Neural Networks

- Recurrent Neural Networks
- Transformers
- Word Embeddings
- Reinforcement Learning
- Transfer Learning
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Zero-shot/few-shot Learning

NLP Techniques

- Textual Similarity
- Named Entity Recognition
- Coreference Resolution
- Event Extraction
- Syntax
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Question Answering

Multilingual/Multimodal NLP

- Machine Translation
- Evaluation of Machine Translation
- Under-resourced Languages
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Multimodal NLP

Applications

- Explainable NLP
 - Computer-aided Language Learning
 - Digital Humanities
 - Legal NLP
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Lectures

Lectures take place Tuesday from 3-4pm and Wednesday from 9-10am.

Please read lecture content ahead of lecture and we will discuss it in class and work on practical examples.

Lectures

The Tuesday lecture will consist of the presentation of the topic and a discussion of the topic.

The Wednesday lecture will consist of a practical session where we will work on examples related to the topic.

Labs

Labs are Friday 1-3. Work will be related to assignment

Assignment

You will develop a project in small groups (2-5). Each member of the team should be responsible for one component.

Please decide on groups and submit a title by January 30th

Submitting the title provides 0.5% of the final grade.

Journal

Your group will keep a journal of your progress. This will be submitted at the end of each two week block, first submission is due January 31st.

The journal should include: * What you have done * What you plan to do * Any problems you have encountered

Lab Sessions

Lab sessions are for use to work on and discuss the project. Groups should be able to complete the project in the lab sessions.

Each journal entry must be discussed with the lab tutor or lecturer in the lab.

50% attendance is required for this discussion, in order for the group to receive a mark.

Journals are worth 15% of the final grade.

Presentation

Each group will present their project in the final lab session.

This will be a 10 minute presentation followed by 5 minutes of questions.

This is worth 9.5% of the final grade.

The schedule for the presentations will be confirmed at a later date.

Presentations will be peer-marked.

Final Report

The final report is due on April 4th.

This is an individual report detailing the work that you did on the group project.

This is worth 25% of the final grade.

Exam

The exam will be a standard written exam.

It is worth 50% of the final grade.