Course Logistics

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Goals of the Course

1. Make you able to read the newest MT papers
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2. Give you some intuition on how the models behave
What We Expect You to Know

- Basics of deep learning
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  - basic neural architectures
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  - training by backpropagation

Enrolling NPFL087 Statistical Machine Translation and NPFL114 Deep Learning is recommended.
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- Be familiar with machine translation
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  - MT evaluation

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  - main problems of MT and why they are difficult
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First Part: Lectures

1. Discussion on a reading assignment (20 minutes)
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Preliminary Syllabus

• Introductory notes on deep learning and machine translation
• Neural architectures for NLP
• Sequence-to-sequence learning with attention mechanism using RNNs
• Sequence-to-sequence learning using self-attention networks
• Dealing with limited vocabulary (character-based methods, sub-word units)
• Algorithmic tricks to improve model performance (beam search, ensembling)

The topics may change based on your interests.
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Second Part: Paper Presentations

Every student will:

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Papers will cover recent research topics including: *unsupervised translation*, *interpretability*, *alternative decoding schemes* (*non-autoregressive NMT*, *Levenshtein Transformers*).
To pass the course, you need to:

- read the papers assigned for the seminar and submit an answer to a question for each paper before the seminar (via a Google Form),
- present a paper to your fellow students,
- write a test at the end of the semester.

The seminar is an **optional** course, awarded by **3 credits**.
The course materials & reading questions will be available on the course webpage.

If you have questions, drop us a line:
- Jindřich Helcl (helcl --at-- ufal.mff.cuni.cz)
- Jindřich Libovický (libovicky --at-- ufal.mff.cuni.cz)

http://ufal.mff.cuni.cz/courses/npfl116