RNN + Assignment 8, 9

(Neural Networks Implementation and Application Tutorial)

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Overview

- Assignment 8
- Content
- Assignment 9

Assignment 8

- What was the hardest part?
- Who wants to present?

Recurrent Neural Networks

- What's an RNN?
- What's it used for? What input can it *consume* and *produce*?
- How does it work?

RNN cells

- vanilla RNN
- LSTM
- GRU

Improvements

- Bidirectionality
  - Why?
- Multiple layers
  - How does that work?
  - Why would that be useful?

PyTorch pecularities

- You can't have a "ragged tensor"
- All sequences in a batch must be *padded* to the same length
  - If you do that, make sure to mask the padded elements
  - Alternative is gradient accumulation (effective batch size of 1)

Assignment 9

- Czech diacritization
- Start early
- Any questions?