

NLP session 06: Preparation for next session

- Watch the final lecture of [Neural Networks: Zero to Hero](#) (Let's build GPT: from scratch, in code, spelled out). If you are confident in your understanding of bigram models and backpropagation, you can skip/fast-forward the contents from about minute 22 to minute 42. Watch at least until 1:19. The remainder of the video is interesting but not essential to understand the basics of large language models such as GPT. We will not discuss the content from 1:19 onward in detail in this class.
- Read Chapter 1, *Introduction to human-in-the-loop machine learning*, from the book “Human-in-the-Loop Machine Learning” (PDF in Aula Global)

Recommended

- Read Yoav Goldberg's [A Primer on Neural Network Models for Natural Language Processing](#), at least until page 35

Optional

There are three topics you could introduce next week. This would count toward your in-class participation grade. If you want to present it, announce this on this week's forum on Aula Global. In this way others will know that the topic is already taken.

1. Based on the [Companion notebook](#) to the Zero to Hero video on GPT, explain what the first 12 cells of the code are doing. This can be very brief (about 2-5 minutes) if there are no questions!
2. Based on the [Companion notebook](#) to the Zero to Hero video on GPT, explain self-attention (cells 17-22). You can use external resources to motivate/explain it if you want. This counts as all four in-class participation grades. Aim for 10-20 minutes.
3. Give an introduction to *Active learning*, based on Chapter 1 from *Introduction to human-in-the-loop machine learning* (focus on subsection 1.3). Use Zhang et al.'s [A Survey of Active Learning for Natural Language Processing](#) or other online resources as secondary resources to illustrate how active learning can be useful for NLP. This counts as two in-class participation grades.