

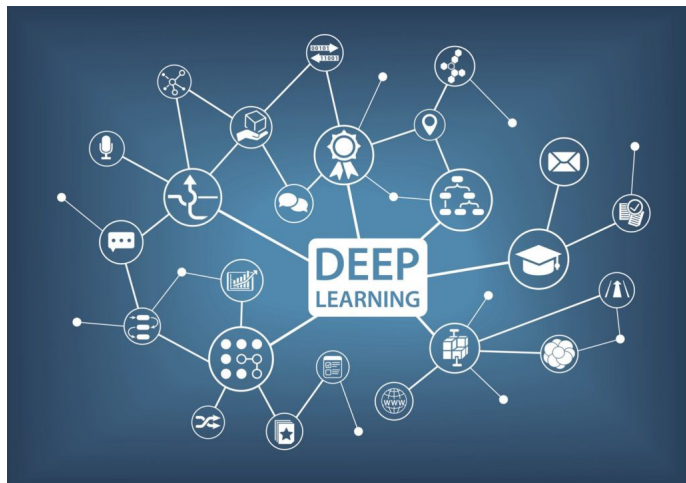


Deep Learning for Natural Language Generation in Discrete Latent Space

Recent advances in deep learning have pushed the limit of model performance for natural language generation. Researchers proposed to leverage various neural models, including variational autoencoder, wasserstein autoencoder, etc, for generating natural language. These models typically generate natural language by sampling in a continuous latent space, which helps the model diversify the generated language. However, these methods often suffer from the problem that the generated sentences are not consistent in grammar. One explanation for this problem is that natural language sentences consists of discrete symbols, and thus sampling from a continuous space could be problematic as the sampled data point might have a low probability density for natural language representation.

To solve this problem, we aim to generate fluent and grammatical natural language sentences from a variational, discrete latent space, in which we can explore other specific language generation tasks such as text style transfer or paraphrase generation.

In this project, you will leverage state-of-the-art deep learning models to generate natural language sentences. You will have access to powerful GPUs, and weekly discussions with experienced PhD students in deep learning.



Requirements: Strong motivation, proficiency in Python, ability to read papers and work independently. Prior knowledge in deep learning is preferred.

Interested? Please contact us for more details!

Contact

- Zhao Meng: zhmeng@ethz.ch, ETZ G61.3
- Damian Pascual Ortiz: dpascual@ethz.ch, ETZ G93
- Yunpu Ma: cognitive.yunpu@gmail.com