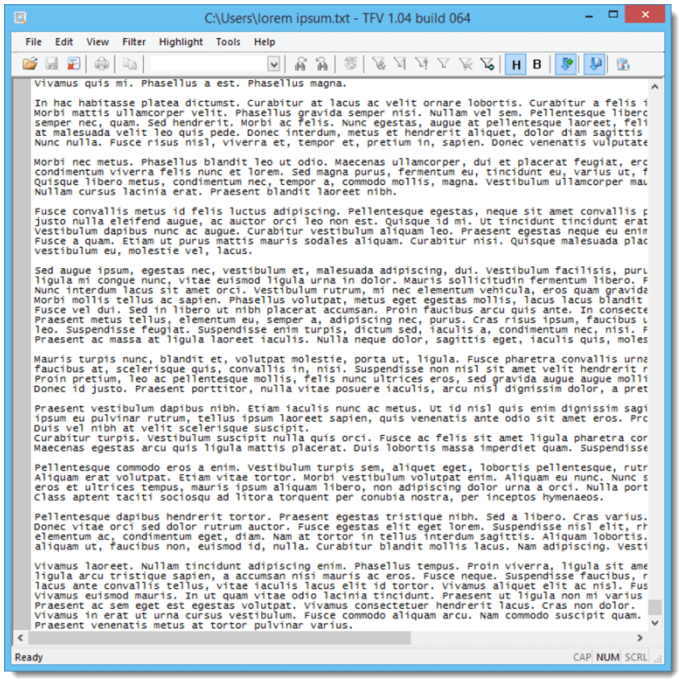
hugomcp@di.ubi.pt, 2026/27

Machine Learning

Practical Sheet 9: RNNs

Search in the web for a simple text corpus, and save in plain text format.



1. Use the corpus found as input of the Python script, available at the course web page (Credits: Andrej Karpathy), and analyze the quality of the generated output with respect to the training time.

2. Identify the "d" hyper-parameter in the script (dimension of the hidden states $\boldsymbol{h}$), and vary it. Analyze the differences in the quality of the generated output.

3. Change the function that transforms each symbol in the latent representation (e.g., by obtaining a simple manifold, where elements appear close to each other depending of the prior probabilities of being adjacent in a learning set. As example, if "a" appears ofen close to "m", then their latent representations should be close to each other). Conclude about the quality of the generated output, using the new latent representations.