

Programming Assignment 1

You are expected to complete the python notebook uploaded on piazza and answer the following questions in a report (to be uploaded in pdf format on gradescope):

1. Write the sampling program. Explain in word the effect of temperature parameter and the concept of logit and sigmoid functions.
2. Run the program (learning and generation) with different parameters (temperature, sentence length, etc...). Can you report the effects? At what temperature levels the music tends to become more or less repetitive? How does the sentence length affect the result?
3. Report some tracking of the error progress - using either matplotlib or tensorboard (Plotting and visualization libraries in python)
4. Here is a musical question about the results: In your observation of the musical quality of the output pay attention to musical aspects of the generated music. For example, the header includes key and meter values. Does the generated music correspond / comply with these values? Is there a correct or consistent metric structure (number of beats in a measure)? Are the different voices or chord harmonious (sounding good together)? Any other musical comments and observations (harmony, musical form, etc.)?
5. (Optional) Try initializing the generator with more header information than just "<start" symbol. Can you initialize the actual melody, or find some other specification so that the generate music will be more predictable?