

SSIE-500: Homework 2

Playing with Python (1)

Hiroki Sayama
sayama@binghamton.edu

Deadline: February 14, 2019 (10:00am)

Work on the following tasks:

1. Generate a nonsensical text data by typing your computer's keyboard randomly and save the result as a .txt file. The text should be reasonably long (say, several thousand characters to fully capture the statistical nature of your typing habits).
2. Write a Python code that does the following:
 - (a) Read the above text file.
 - (b) Count the frequencies of characters in the text, and plot a histogram.
 - (c) Count the frequencies of transitions from one character to another in the text, and visualize the results somehow.
 - (d) Compare the results obtained above with results of another student (make sure to give credits to your collaborator!). Discuss whether you can use these results to identify an individual, and if so, how.
3. Produce a PDF file of your report using \LaTeX , showing your Python code, the results and any comments/discussions, and submit it to the Assignment page in MyCourses by the deadline. To include program codes in \LaTeX , you can use either the `listings` environment or the `pdfpages` package discussed earlier this week.