Approaches

1. Overview: Given the input with keywords, sentence or document to generate a Chinese poem with classic style.
2. Keyword: This step ensures the keyword of every line. Normally, the classic style poem has four lines, which means having 4 related keywords. In our project, we will try to accomplish generating poem with given topic (input) of one keyword, multiple keywords, a sentence, a document sequentially. Whatever the input is, we will generate 4 related keywords for each line at last. However, we should be careful with the demand of modern keywords, which will be addressed later. At last, if we successfully finish all the parts with great performance, we will accomplish acrostic poem given customized input as one of our creativity.
3. Generation: Currently, Recurrent Neural Network is a popular (RNN) and powerful method for generating poem. We want to first accomplish generating with a RNN model. Then we will try to combine other methods into RNN to improve the results. For example, we may involve a rule-based method into RNN because Chinese poem has some strict rules.
4. Dataset: We will collect more than 50000 Chinese poem as dataset, which should be enough.