Senna

What is Senna?

According to the SENNA website (https://ronan.collobert.com/senna), we could find the following information:

> SENNA is a software distributed under a non-commercial license, which outputs a host of Natural Language Processing (NLP) predictions: part-of-speech (POS) tags, chunking (CHK), name entity recognition (NER), semantic role labeling (SRL) and syntactic parsing (PSG).
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> ……
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> SENNA's details concerning POS, CHK, NER and SRL tasks are included in a JMLR paper. Later, the techniques have been extended and applied to syntactic parsing (PSG), and published in a AISTATS paper.

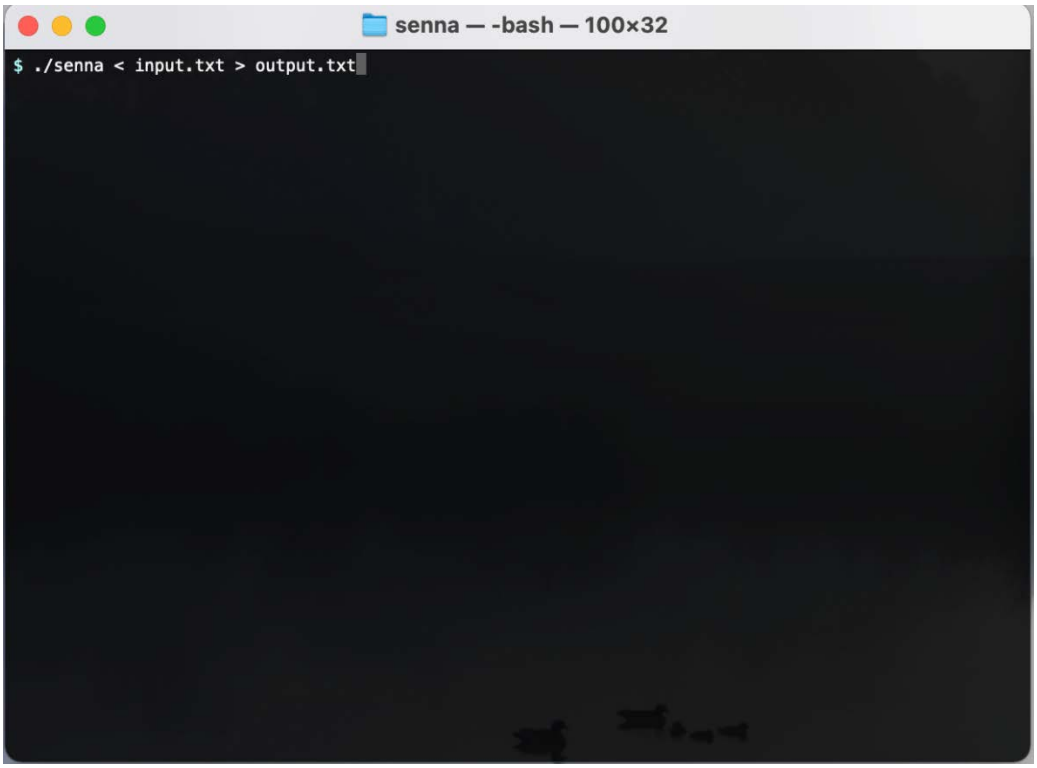
System Requirements

SENNA is written in C, so no external packages are required. SENNA supports multiple platforms including Linux, Windows and Mac OS. It requires about 200MB of RAM and should run on any IEEE floating point computer.

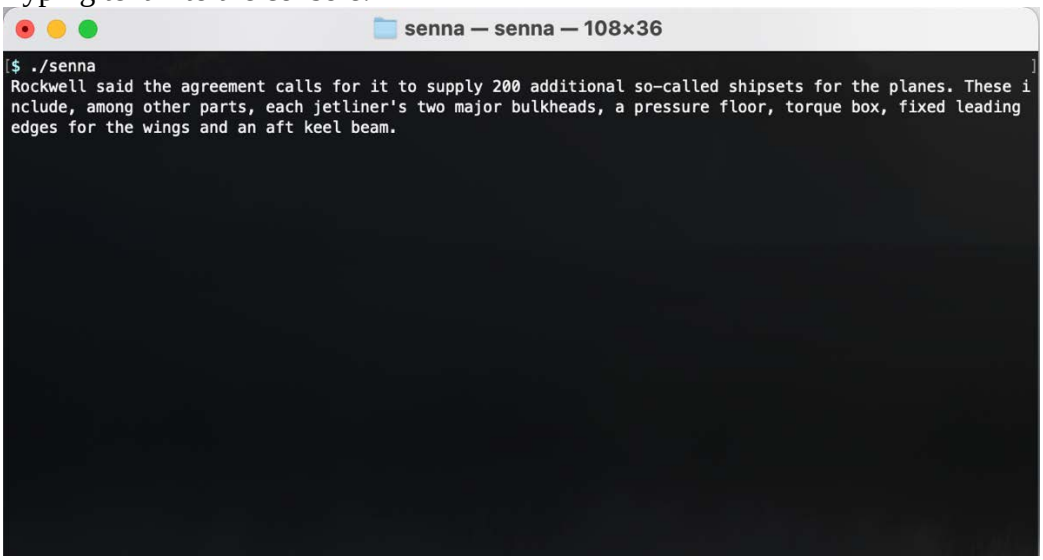
Input

The input for SENNA could either be an input text file, or a piece of text manually typed in the command console after the input prompt is shown.

1) Using an input text file; You could use the pipes ‘<’ and ‘>’ and output the results in an output file:



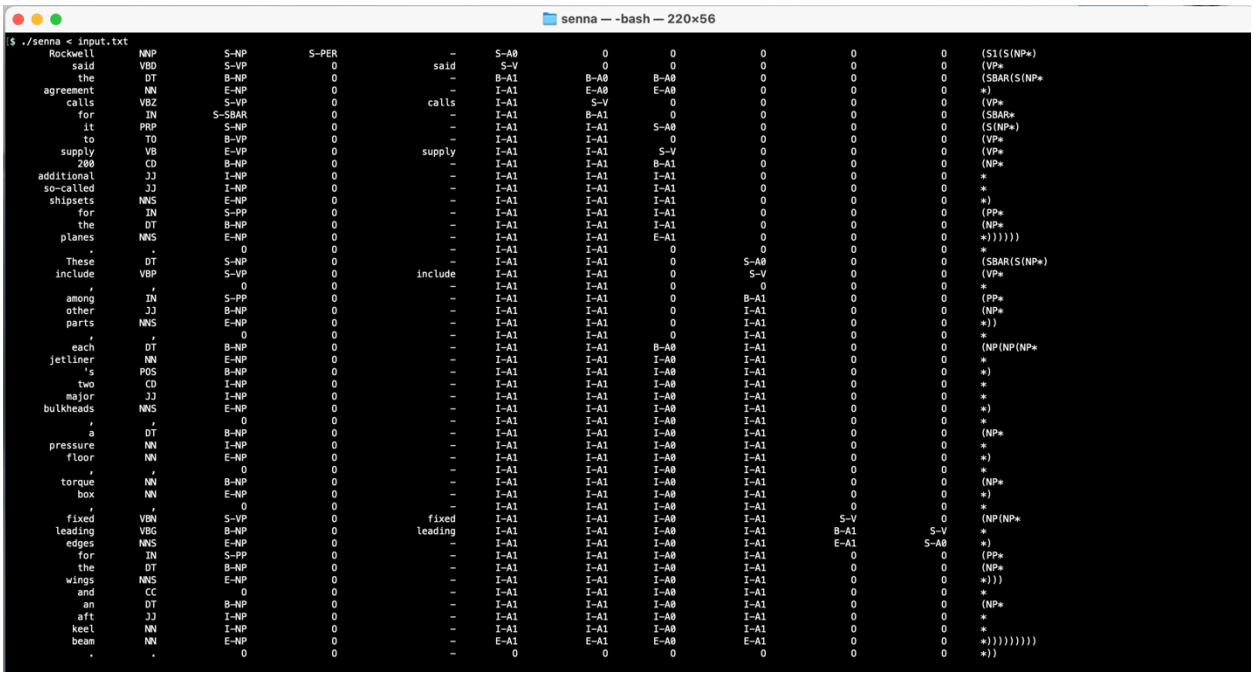
2) Typing text into the console:



Warning: Each input line is considered as a sentence. If each line is not a clearly separated sentence, there might be parsing errors due to incorrect sentence separation.

Output

SENNA gives results of POS, CHK, NER and SRL and are shown in different columns of the results. The number of columns may differ in each attempt, as the complexity of each sentences may differ from one another. The first to the fourth columns indicate the word itself, its POS, CHK, and NER respectively; the last column refers to the PSG (syntactic parsing) results, and the rest of the columns are SRL results. An example of the output is shown below:



References:

R. Collobert, J. Weston, L. Bottou, M. Karlen, K. Kavukcuoglu and P. Kuksa. **Natural Language Processing (Almost) from Scratch**, *Journal of Machine Learning Research (JMLR)*, 2011.

R. Collobert. **Deep Learning for Efficient Discriminative Parsing**, in *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2011.

Collobert, Ronan. *SENNA*, ronan.collobert.com/senna/