1. Proper Nouns Vocabulary {*English phrase* : *Chinese phrase*}
2. Pre-process: we annotate our training data using the following scheme.
   - English sentence: I love Huawei → I love Sxxx
   - Chinese sentence: 我 爱 华为 → 我 爱 Txxx0

   Proper nouns in source sentences are substituted with a unique token Sxxx, while proper nouns in target sentences are denoted as Txxxd(for d in -7,...,7 or n) to simultaneously denote (a) the fact that a word is a proper noun and (b) its relative position d with respect to its aligned source word. The alignment can be computed with the Berkeley aligner.
3. Train: we use state of art NMT system to train our annotated datasets and obtain our model.
4. Post-process: we use the model to translate the sentences in the test set and replace the tokens Txxxd in the system's output with a translation of its aligned source word, using the Proper Nouns Vocabulary.