

Constraint-based Neural Architectures for the Translation of Literary Texts

In recent years, machine translation has made significant progress. Specifically, neural network-based translation models trained on large parallel text corpora have significantly improved the state of the art, so that technical texts can often be automatically translated with a reasonable level of accuracy. Nevertheless, translating a literary text remains a difficult task for a computer system. For a successful translation of a literary text, literary features (such as figurative language, or rhyme in poetry) must often be taken into account. Since machine translation models are almost exclusively trained on non-literary texts, it is difficult to see how these models will be able to handle these aspects; a machine translation model aims to find the most accurate translation based on its language model, and thus leaves little room for creativity.

This presentation aims to provide an overview of constraint-based neural architectures for machine translation of literary texts. Unconstrained neural network architectures seek to reproduce the data they were trained on; by constraining the neural network's language generation, the network is incited to find novel ways to express the same semantic content---a process which lends itself to exploratory creativity. The approach will be outlined and demonstrated using poetry translation as an example.