

RNN Approaches to Text Normalization: A Challenge

This paper presents a challenge to the community: given a large corpus of written text aligned to its normalized spoken form, train an RNN to learn the correct normalization function. We present a data set of general text where the normalizations were generated using an existing text normalization component of a text-to-speech system. This data set will be released open-source in the near future. We also present our own experiments with this data set with a variety of different RNN architectures. While some of the architectures do in fact produce very good results when measured in terms of overall accuracy, the errors that are produced are problematic, since they would convey completely the wrong message if such a system were deployed in a speech application. On the other hand, we show that a simple FST-based filter can mitigate those errors, and achieve a level of accuracy not achievable by the RNN alone.

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