This tutorial focuses on the recent impact of corpus-based techniques on speech synthesis and recognition. It starts by introducing the basic concepts of text-to-speech and speech-to-text conversion and proceeds with the presentation of some selected examples of the use of data-oriented methods in both areas.

The role of statistics in the context of automatic processing of speech and language is nowadays far too important for us to attempt to cover all topics. Hence, the tutorial will only cover the use of such approaches in the context of speech synthesis from (unrestricted) text and of automatic speech recognition as in dictation systems. Neither can we attempt to be fair in our selection of illustrative examples. This would be a very difficult task, specially taking into account the multilingual nature of the theme.