Normal to Dysarthric Voice Conversion for Data Augmentation

- Dysarthric speakers have impaired motor skills and produce distorted speech
- Current ASR trained on normal speech can't recognize dysarthric speech
- Need to create dysarthric speech from normal speech to increase amount of training data
- Unique problems to dysarthric speech such as no phone alignments and high variability in speech characteristics from speaker to speaker

Dysarthric to Normal Speech Conversion

- Rather than perform normal to dysarthric speech conversion for data augmentation, we might go for the other way around for the same purpose, i.e., speech recognition
- Train WaveNet to generate normal speech using dysarthric auxiliary features(mcep, vuv, F0, aperiodicity, etc.)
- In testing time, generate waveform using dysarthric auxiliary features only
- May need special processing to account for high variability of dysarthric speech