Multilingual Language and Speech to Speech Translation

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Multilingual Speech Processing

→ Acoustic Modelling

→ Language Modelling

→ Speech Synthesis

→ Challenges

Acoustic Modelling

→ Speech into sequence of words

→ Modelling stages

   → Acoustic Model – speech features

   → Pronounciation Model – pronounciation dictionary

   → Language Model – probability of word sequences

   → Decoder – most likely word sequence

Language Modelling:

→ Portability of multilingualism modelling

→ Morphological Complexity

→ Word segmentation

→ Feasibility of cross-linguistic modelling

→ Probability assignment

Challenges

→ non-native speech

→ Dialects

→ Accents

→ Local interfaces

Speech -to- Speech Translation

⟶ Interlingua based and statistical implementation

⟶ NESPOLE framework by CMU

References

- https://www.sciencedirect.com/book/9780120885015/multilingual-speech-processing