Open Bachelor and Master Theses Topics on

*Machine Listening*

The “cocktail party problem“ or “selective auditory attention“ describes the human ability that allows us to disentangle arbitrary soundscapes into the individual speech and sound sources. While this is an easy task for humans, it remains challenging to equip machines with such an ability.

**Topics**

1) The role of harmonic convolutions for the disentanglement of speech
2) Focus on what you dislike: Inverted selective auditory attention
3) Can video frame inpainting techniques help to enhance speech separation?
4) Can multilingual training data increase the model’s robustness against noise?
5) Speaker embedding fusion for extracting the voices of multiple target speakers

**Other topics on machine listening -> Just text me!**

**We offer**
Intensive support, regular meetings, feedback discussions, nice working environment

**Requirements**
Good knowledge in Python, at least basic knowledge in machine learning, motivation, reliability, personal responsibility, willingness to learn new topics

**Contact**
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