



## Chewing vibration detection using a headset

When eating crunchy food, the vibration produced by chewing can be transferred to the skull and detected on the mastoid bone using accelerometers. A headset is a perfect carrier for embedding various sensors as it has a large surface in contact to the user's head, and the headset brace can generate enough pressure to insure the sensors are attached to the skin firmly, ensuring a good signal quality. The idea of the project is to integrate accelerometers in a headset for chewing detection. There are mainly 3 challenges in this project: 1) merge an/several accelerometer into a headset, 2) carry out experiments for data collection and 3) spot chewing of crunchy food, such as biscuits.



Project type	BSc./ MSc. seminar/thesis
Starting date	Immediate
Work distribution	40% experiments, 30% theory, 30% programming
Useful knowledge	<ul style="list-style-type: none"><li>• Proficient in python</li><li>• Basic knowledge of machine learning</li><li>• Attended course Mustererkennung und Zeitreihenanalyse</li></ul>
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