

# Happy vs. evil laughter

Analyzing laughter samples from Google Audio Set



## Summary

- 25/03/2022
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- Manually selected a set of 90 laughter samples from youtube, representing situations where people laughed at somebody as opposed to laugh with somebody.
- Core Results: Although they sound quite similar, machine learning distinction is possible.

## Key facts

- Master's thesis at the TU-Berlin
- Manually selected a set of 90 laughter samples from youtube (Google Audio Set) Fig 2 shows a sample
- Manually selected situations where people laughed at somebody as opposed to laugh with somebody, each 45 instances, total data size = 90 samples.
- Tried
  - Classifiers: XGB vs SVM (with param C tuning)
  - Features:
    - Opensmile GeMAPS
    - Opensmile Compare 16
    - OpenXBOW w/wo GeMAPS
    - MildLevelDescriptors w/wo GeMAPS
    - TRILL embeddings
    - Wav2Vec-2.0 embeddings
  - Results (Leave-one-speaker-out) see table 1 and Figure 1

## References

<https://github.com/felixbur/nkululeko/>



Fig 2: a sample

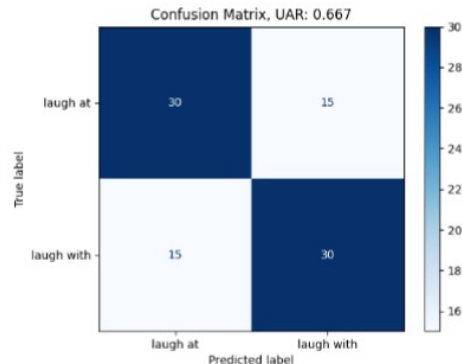
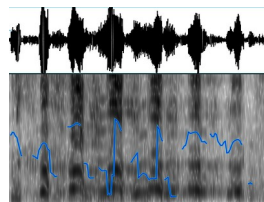


Fig1: Best result: SVM classifier with opensmile eGeMAPS and openXbow features

feats/classifier	XGB	SVM
OS eGeMAPS	.511	.655
OS Compare_16	.566	.611
XBOW	.566	.588
XBOW with OS	.488	<b>.666</b>
MLD	.484	.522
MLD with OS	.488	.588
TRILL emb.	.577	<b>.666</b>
Wav2Vec emb.	.577	.611

Tab1: Results for experiments (LOSO)