EmoDB

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1 Data

1.1 Load report

emodb: loaded with 535 samples: got targets: True, got speakers: True (10), got sexes: True

2 Data exploration

2.1 Correlation of emotion and gender
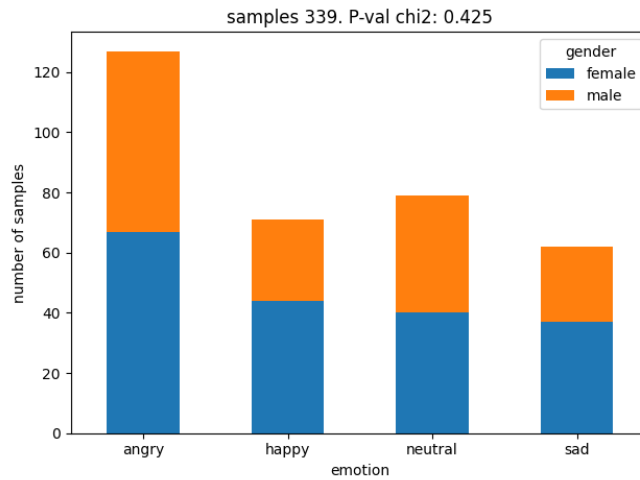
samples 339. P-val chi2: 0.425

Figure 1: Correlation of emotion and gender

2.2 Correlation of emotion and age
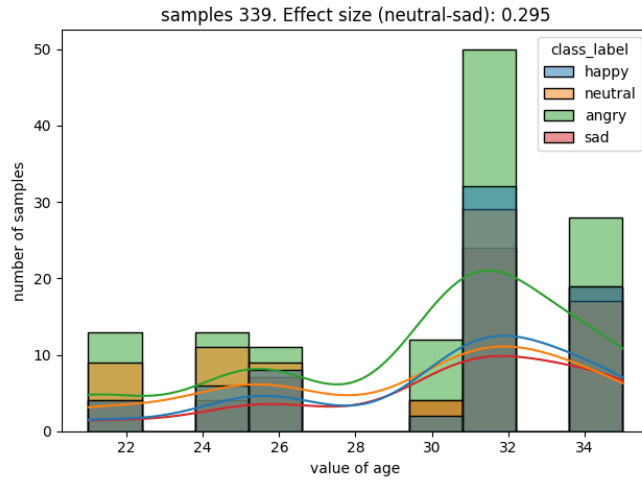
samples 339. P-val chi2: 0.904

Figure 2: Correlation of emotion and age

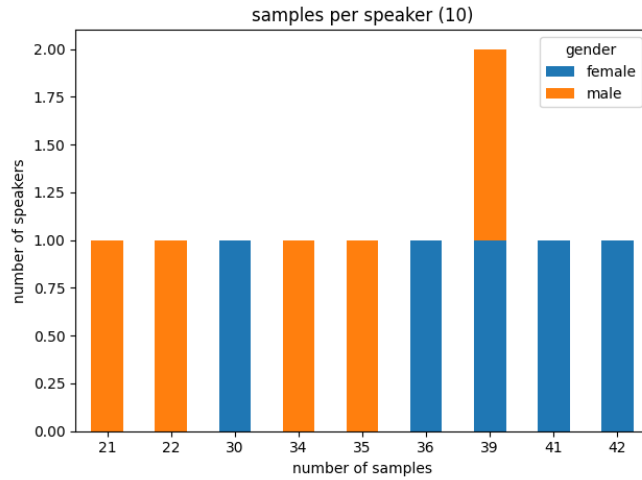## 2.3   Samples per speaker

Samples per speaker (10)

Figure 3: Samples per speaker

2.4   Correlation of emotion and gender
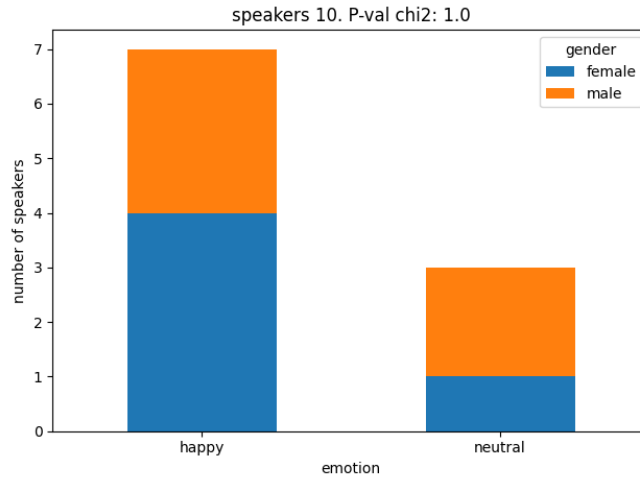
speakers 10. P-val chi2: 1.0

Figure 4: Correlation of emotion and gender

2.5 Correlation of emotion and age
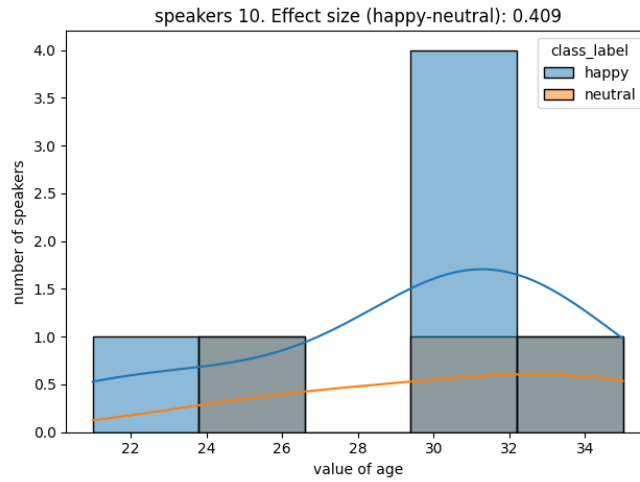
speakers 10. P-val chi2: 0.367

Figure 5: Correlation of emotion and age

2.6 Correlation of emotion and gender
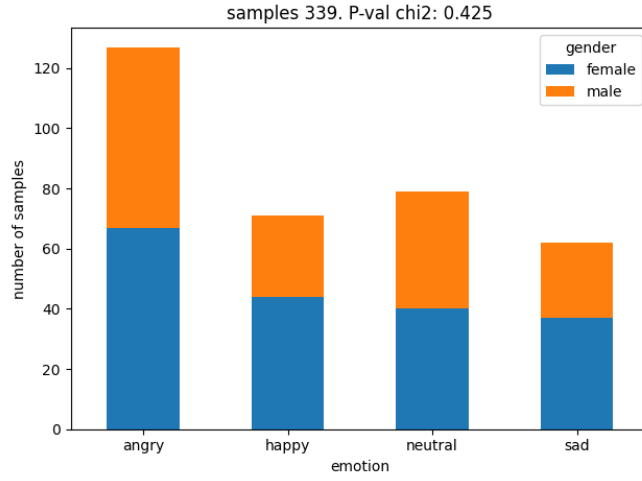
samples 339. P-val chi2: 0.425

Figure 6: Correlation of emotion and gender

2.7 Correlation of emotion and age
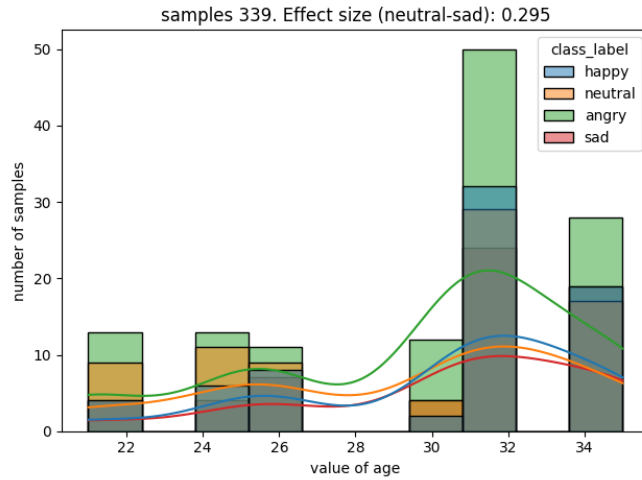
samples 339. Effect size (neutral-sad): 0.295

Figure 7: Correlation of emotion and age

2.8 Samples per speaker
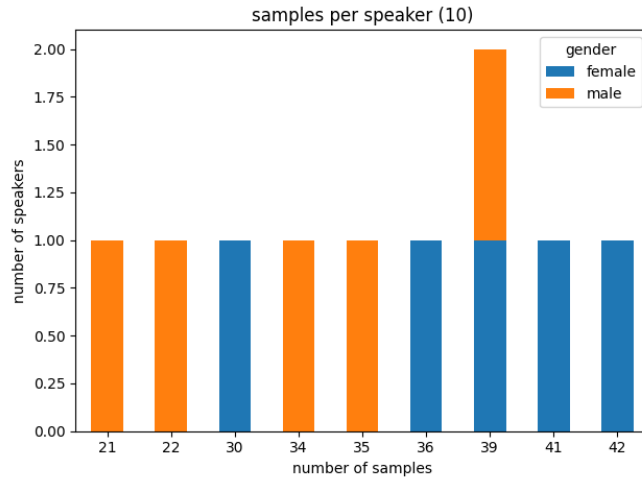
Samples per speaker (10)

Figure 8: Samples per speaker

2.9 Correlation of emotion and gender
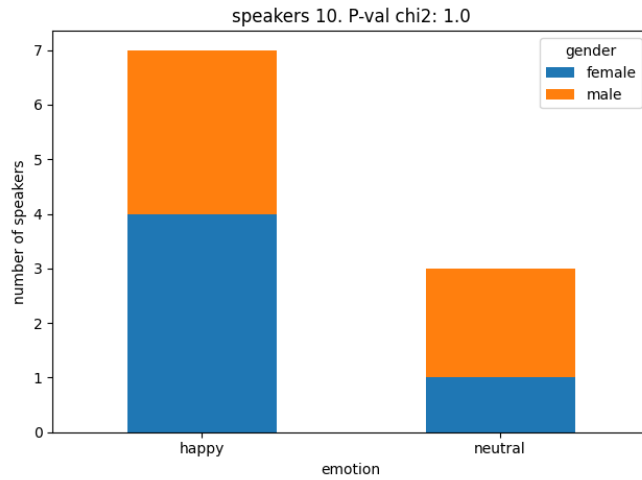
speakers 10. P-val chi2: 1.0

Figure 9: Correlation of emotion and gender

2.10 Correlation of emotion and age

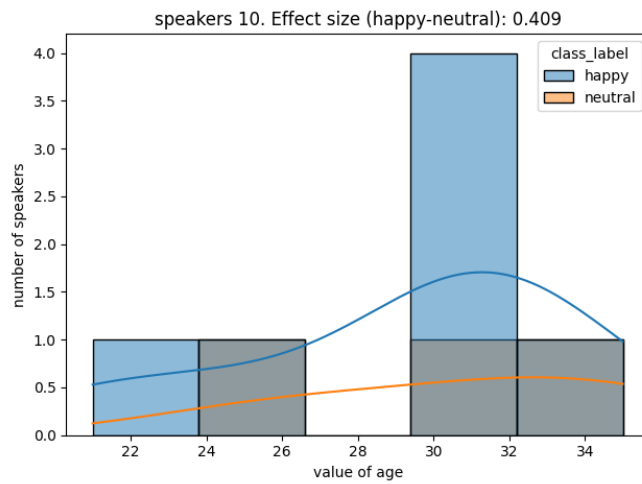speakers 10. Effect size (happy-neutral): 0.409

Figure 10: Correlation of emotion and age

3 Results
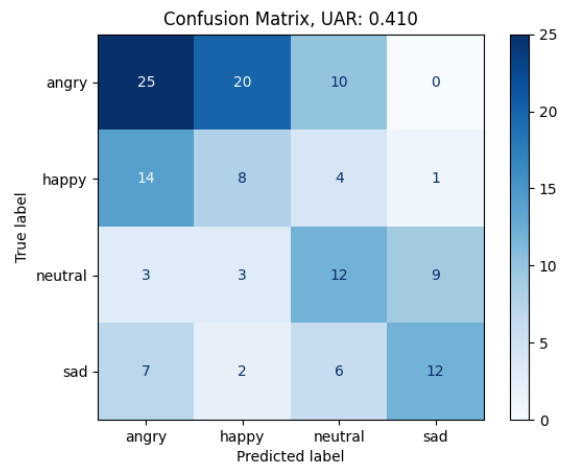
3.1 xgb_praat_os_

Confusion matrix

Figure 11: xgb_praat_os_

3.2 Classification result xgb_praat_os_

{"angry": {"precision": 0.5102040816326531, "recall": 0.45454545454545453, "f1-score": 0.4807692307692308, "support": 55.0}, "happy": {"precision": 0.24242424242424243, "recall": 0.2962962962962963, "f1-score": 0.26666666666666666, "support": 27.0}, "neutral": {"precision": 0.375, "recall": 0.4444444444444444, "f1-score": 0.4067796610169491, "support": 27.0}, "sad": {"precision": 0.5454545454545454, "recall": 0.4444444444444444, "f1-score": 0.4897959183673469, "support": 27.0}, "accuracy": 0.41911764705882354, "macro avg": {"precision": 0.41827071737786026, "recall": 0.4099326599326599, "f1-score": 0.41100286920504836, "support": 136.0}, "weighted avg": {"precision": 0.4371981747243523, "recall": 0.41911764705882354, "f1-score": 0.4253665318800271, "support": 136.0}}
result per class (F1 score): [0.481, 0.267, 0.407, 0.49]
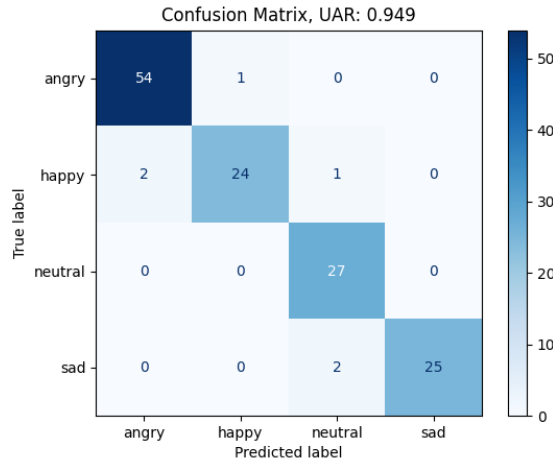
3.3 xgb_audmodel_

Confusion matrix

Figure 12: xgb_audmodel_

3.4 Classification result xgb_audmodel_

{"angry": {"precision": 0.9642857142857143, "recall": 0.9818181818181818, "f1-score": 0.972972972972973, "support": 55.0}, "happy": {"precision": 0.96, "recall": 0.8888888888888888, "f1-score": 0.923076923076923, "support": 27.0}, "neutral": {"precision": 0.9, "recall": 1.0, "f1-score": 0.9473684210526316, "support": 27.0}, "sad": {"precision": 1.0, "recall": 0.9259259259259259, "f1-score": 0.9615384615384615, "support": 27.0}, "accuracy": 0.9558823529411765, "macro avg": {"precision": 0.9560714285714286, "recall": 0.9491582491582492, "f1-score":

0.9512391946602474, "support": 136.0}, "weighted avg": {"precision": 0.9577626050420167, "recall": 0.9558823529411765, "f1-score": 0.9557137960775731, "support": 136.0}}
result per class (F1 score): [0.973, 0.923, 0.947, 0.962]