

• Body Posture and Facial Behaviour Analysis in Movie Cards

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1. Corpus

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Corpus

- 270 cigarette cards from the album "Bunte Filmbilder" (test corpus)
- 17,669 cigarette cards (<https://www.virtual-history.com/movie/moviefcard>)
- 700 movie cards, digitized in cooperation with Filmmuseum Potsdam



Marlene Dietrich



Marlene Dietrich



107/1
„Ross“ Verlag

Harry Liedtke in dem Film

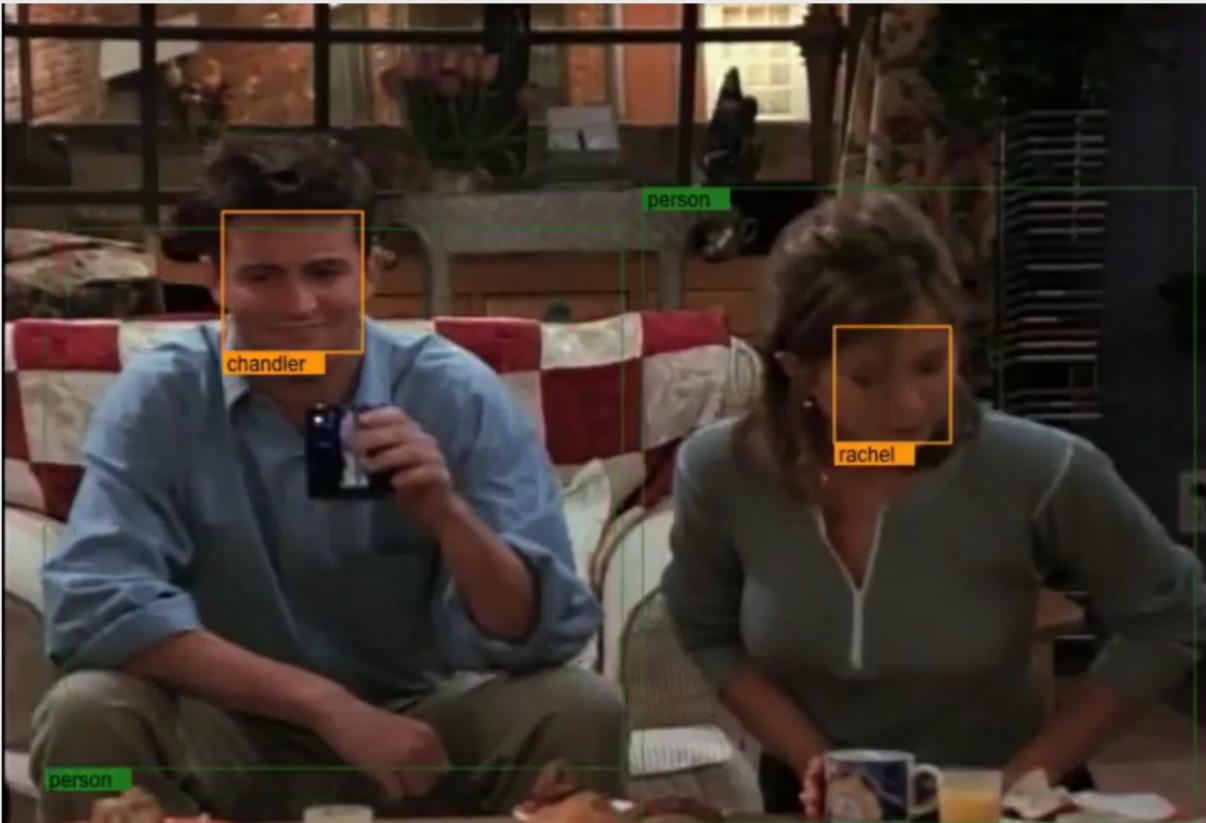
Marlene Dietrich Super-Film
Reproduction verboten.

„Ich küsse Ihre Hand Madame“

Methods

- Face Recognition: Facenet (Sandberg 2018)
- Pose Recognition: Detectron (Girshik et al. 2018), RMPPE (Cao et al. 2017)
- Facial Behavior Analysis: OpenFace (Baltrušaitis et al. 2018)

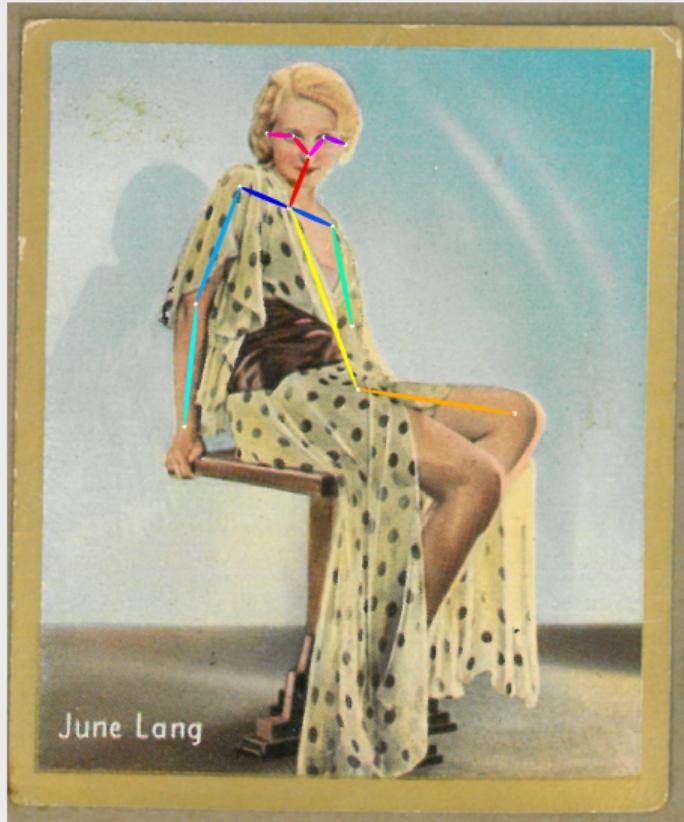
Face Recognition



Pose Recognition (Detectron)



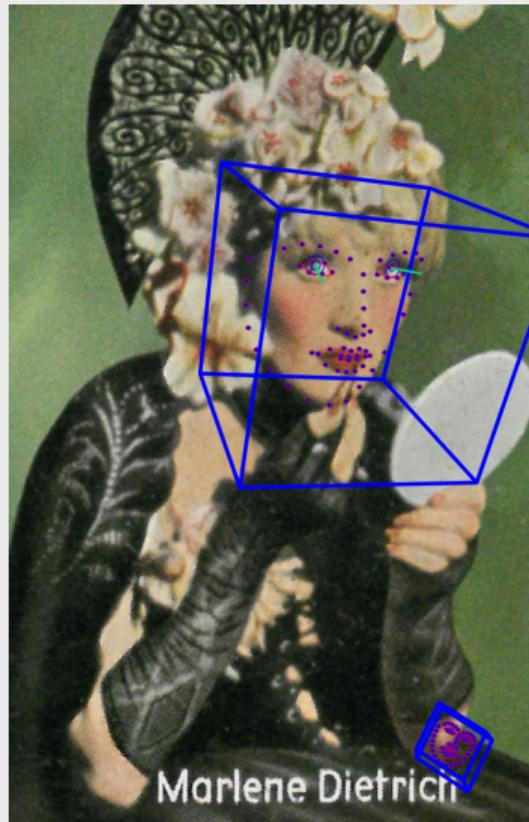
Pose Recognition (RMPPE)



Pose Recognition (combined)



Facial Behavior Analysis: Position



Facial Behavior Analysis: Emotion

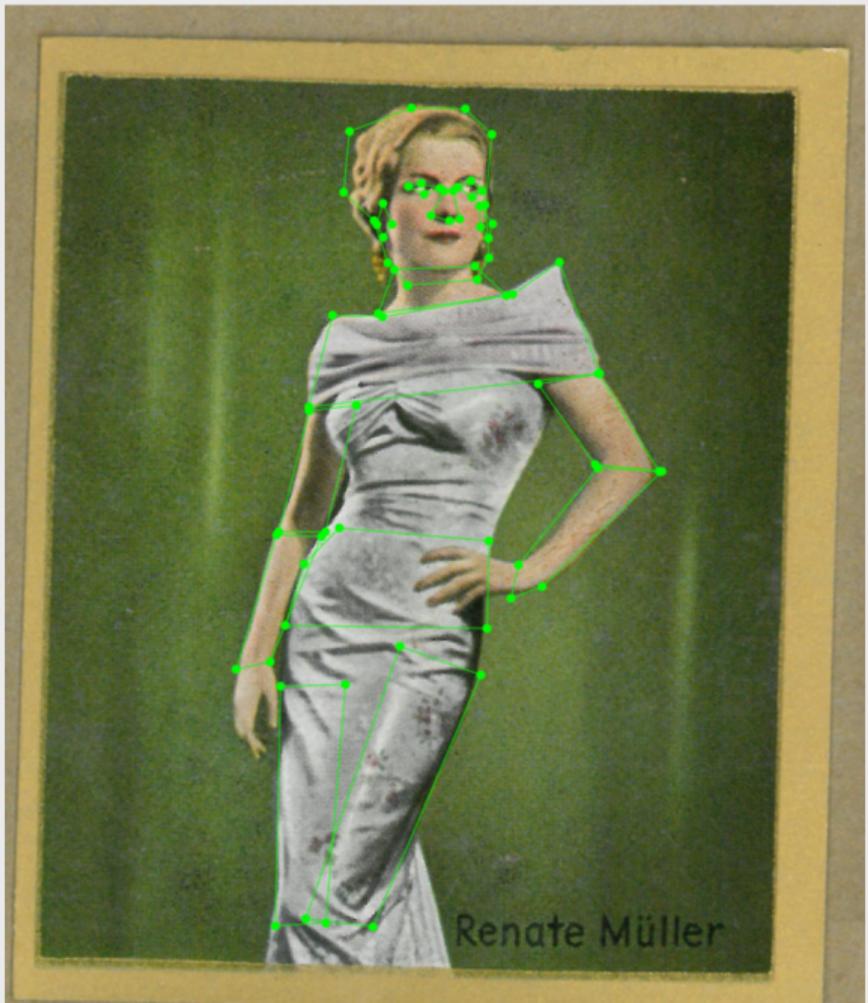
Main Action Units

Action Unit	Description	Facial Muscle	Example (Hover to Play)
1	Inner Brow Raiser	<i>Frontalis, pars medialis</i>	
2	Outer Brow Raiser (unilateral, right side)	<i>Frontalis, pars lateralis</i>	
4	Brow Lowerer	<i>Depressor Glabellae, Depressor Supercilli, Currugator</i>	

Evaluation

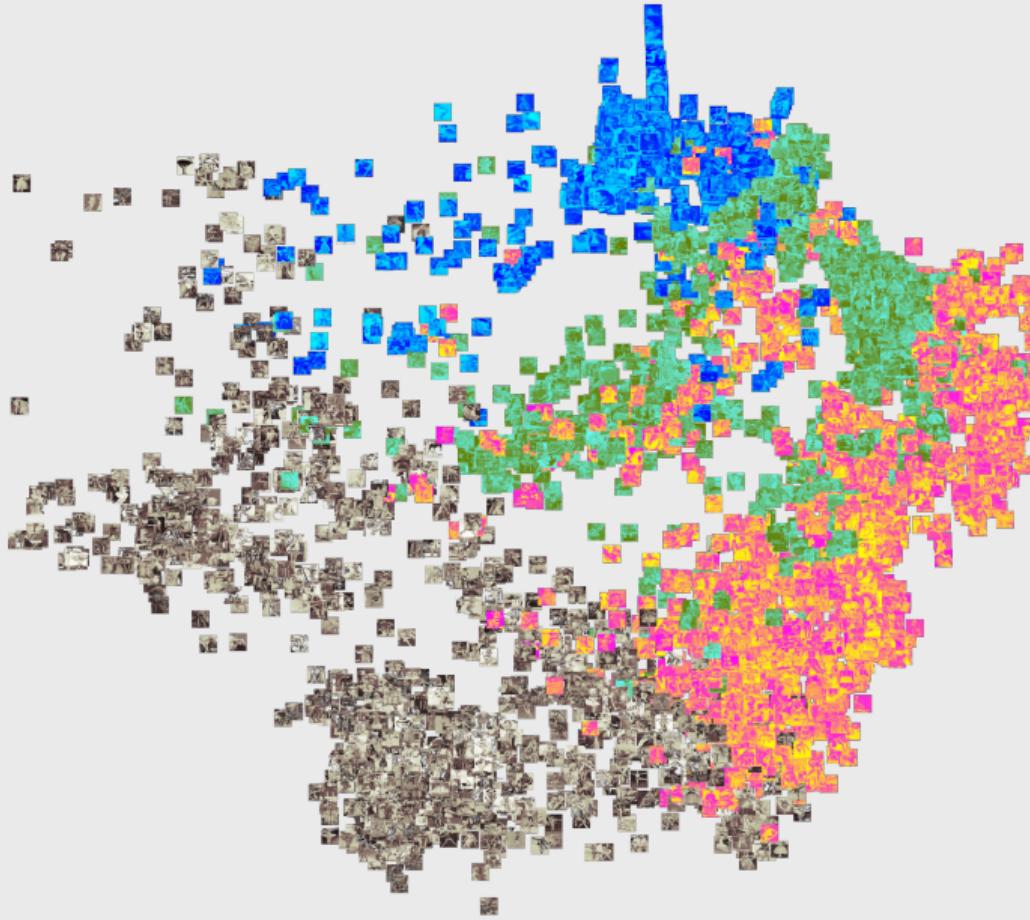
Evaluation

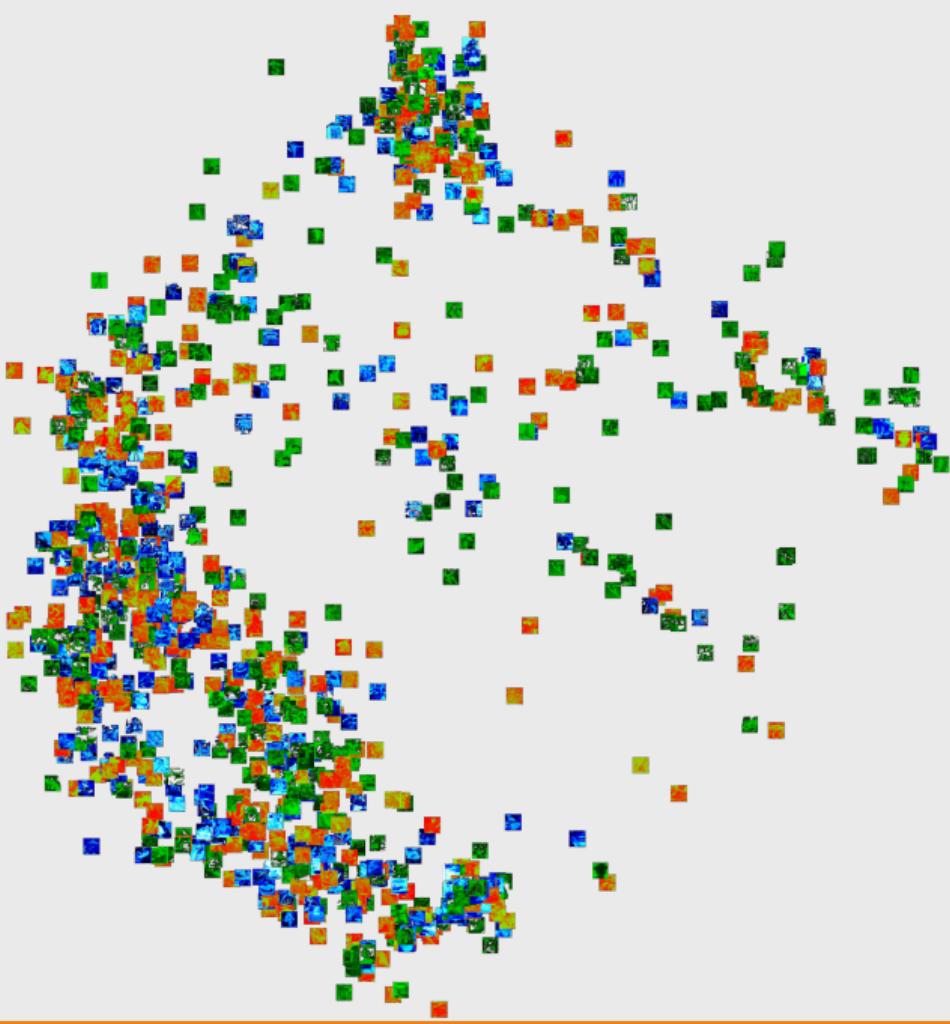
- **Face Recognition:** Recognition rate
- **Pose Recognition:** Annotate limbs
- **Facial Behavior I:** Annotate faces → IoU
- **Facial Behavior II:** Annotate base emotions
(joy, sadness, surprise, fear, anger, disgust, contempt)

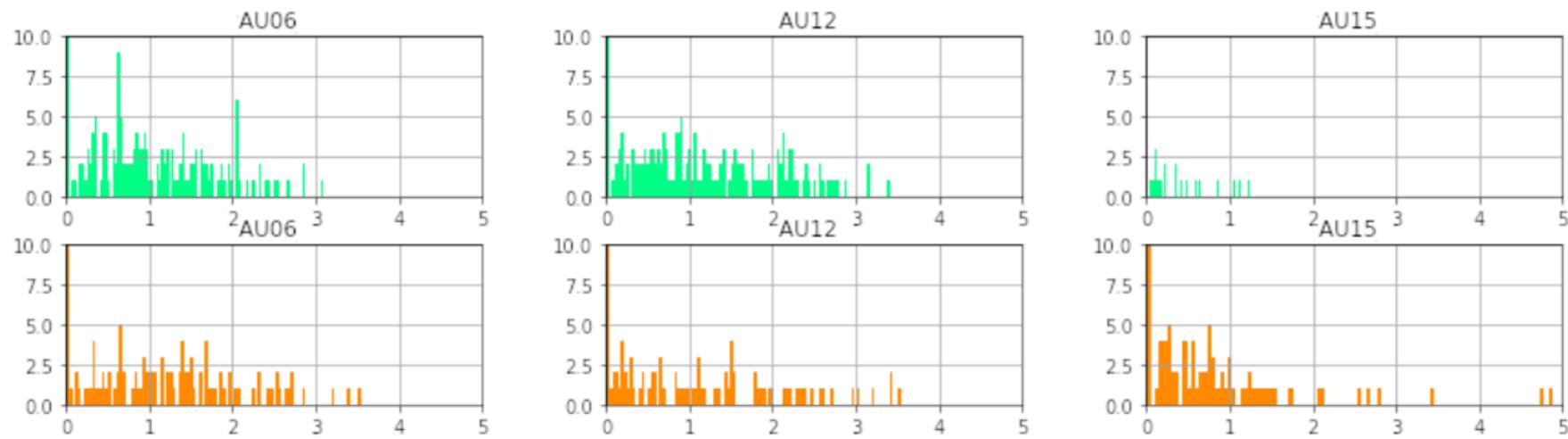


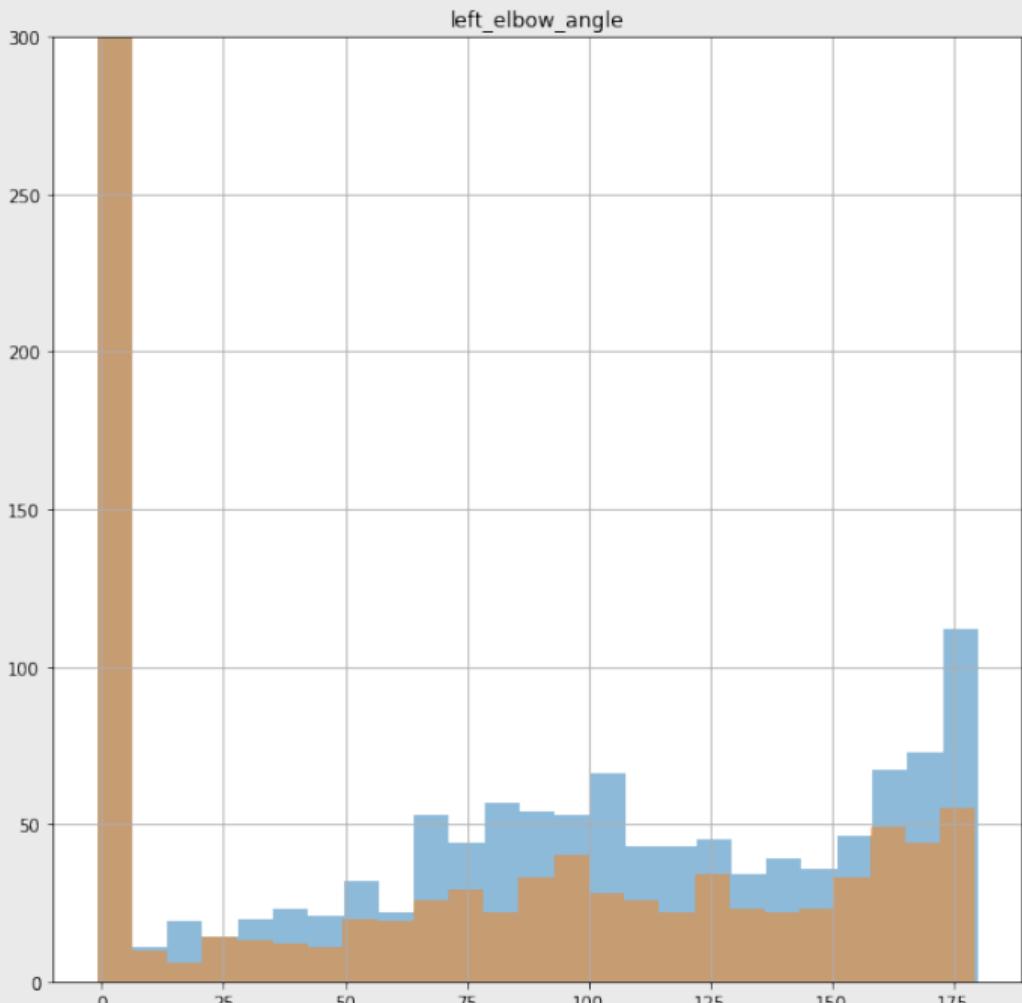
Renate Müller

Results

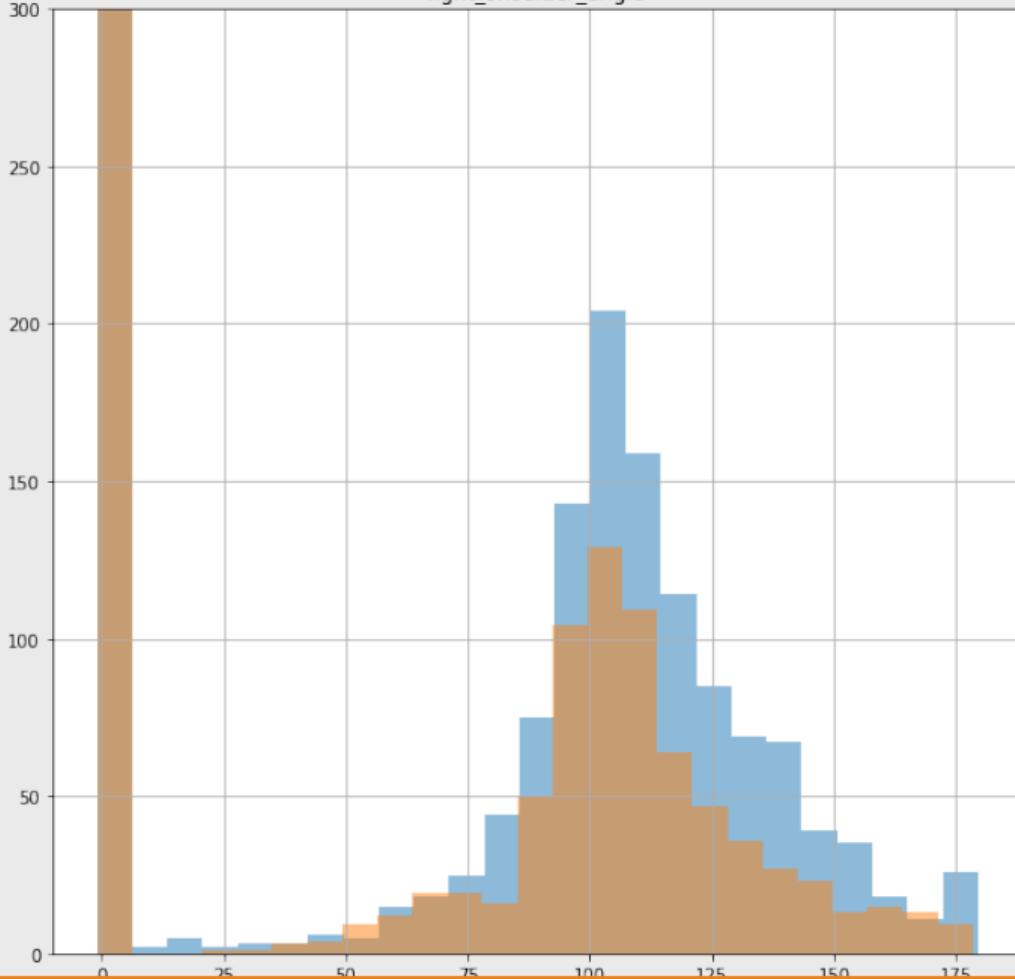








right_shoulder_angle



Our methodological mix allows to quantitatively capture the use of bodily signs

Universal approach; no need for adaptation to specific research questions

Literature

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<https://ieeexplore.ieee.org/document/8373812> [Zugriff 29. 9. 2018].
- Bermeitinger et al. 2018. “Contextualising Bandera. Eine Distant Watching-Methode”, DHd 2018.
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