

# Factors affecting identification of individuals by gait cycle

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# Introduction

- Gait Cycle
  - The combined movement of limbs which results in locomotion
- Objective
  - To study which parameters are important for human perception while identifying individuals by their walking style
- Gait based recognition is an example of action specific biometric

# Previous work

- Model-free
  - No representation of 3D structure
  - A shape is fitted on the silhouette data and parameters of this shape are analysed
  - Implicit model
- Model-based
  - A body model is fit to every frame and parameters are analyzed
  - Explicit model

# Experiment

- Collection of silhouette and skeletal data of five participants for two different view points
- Identification of videos by another larger group using silhouette data
- Computational analysis of parameters which may be important in identification using skeletal data

# Parameters under consideration

- Height of subject
- Ratio of lower body to upper body
- Stride Length
- Speed
- Variation in Thigh angle
- Movement of torso

# References

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