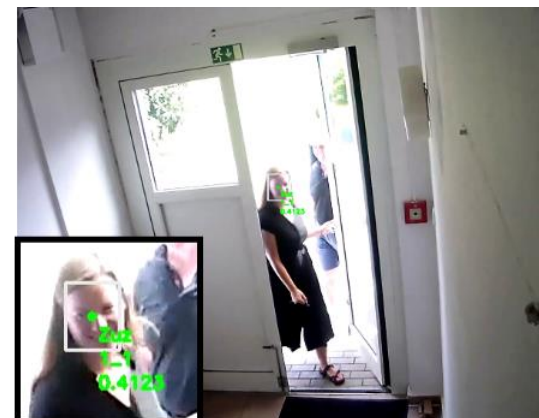
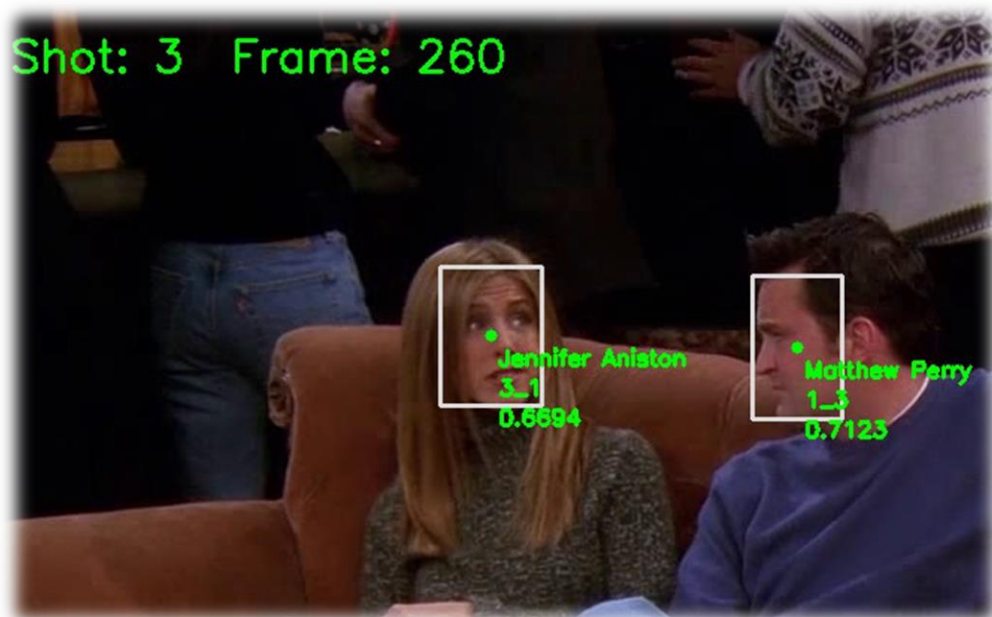


STAR: Screen Time and Actor Recognition in Video Content



T. Kerepecký, F. Šroubek, B. Zitová and J. Flusser (UTIA AV ČR)


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26. 4. 2024, Technická univerzita v Liberci



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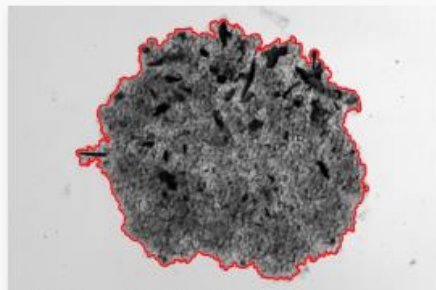
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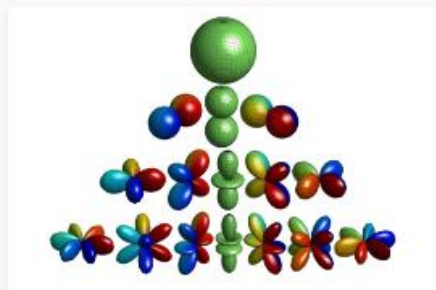
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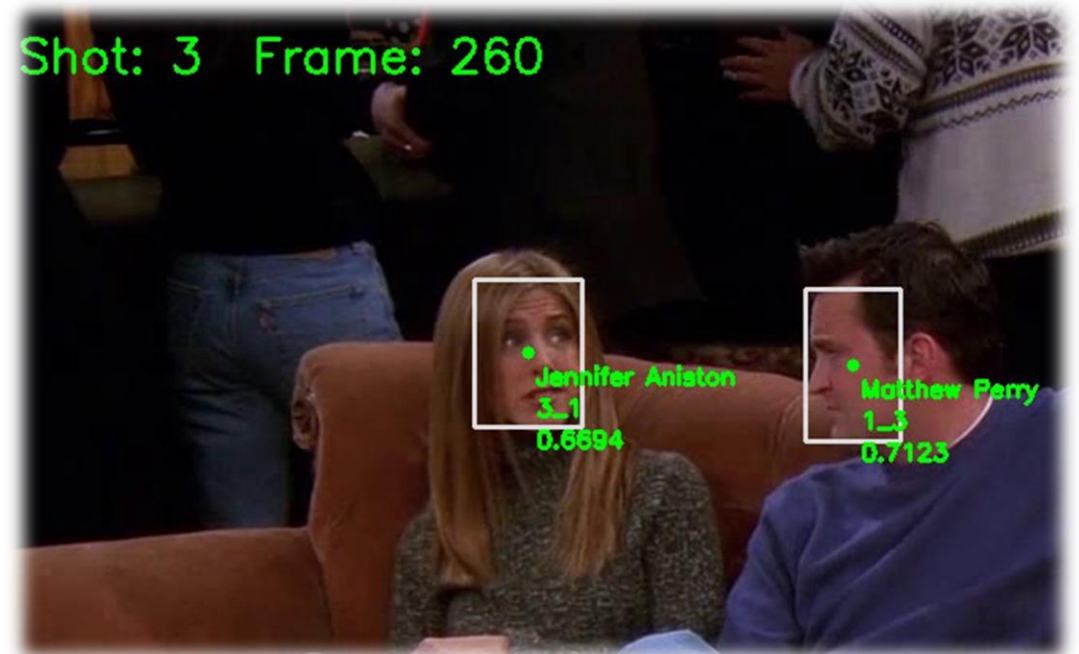
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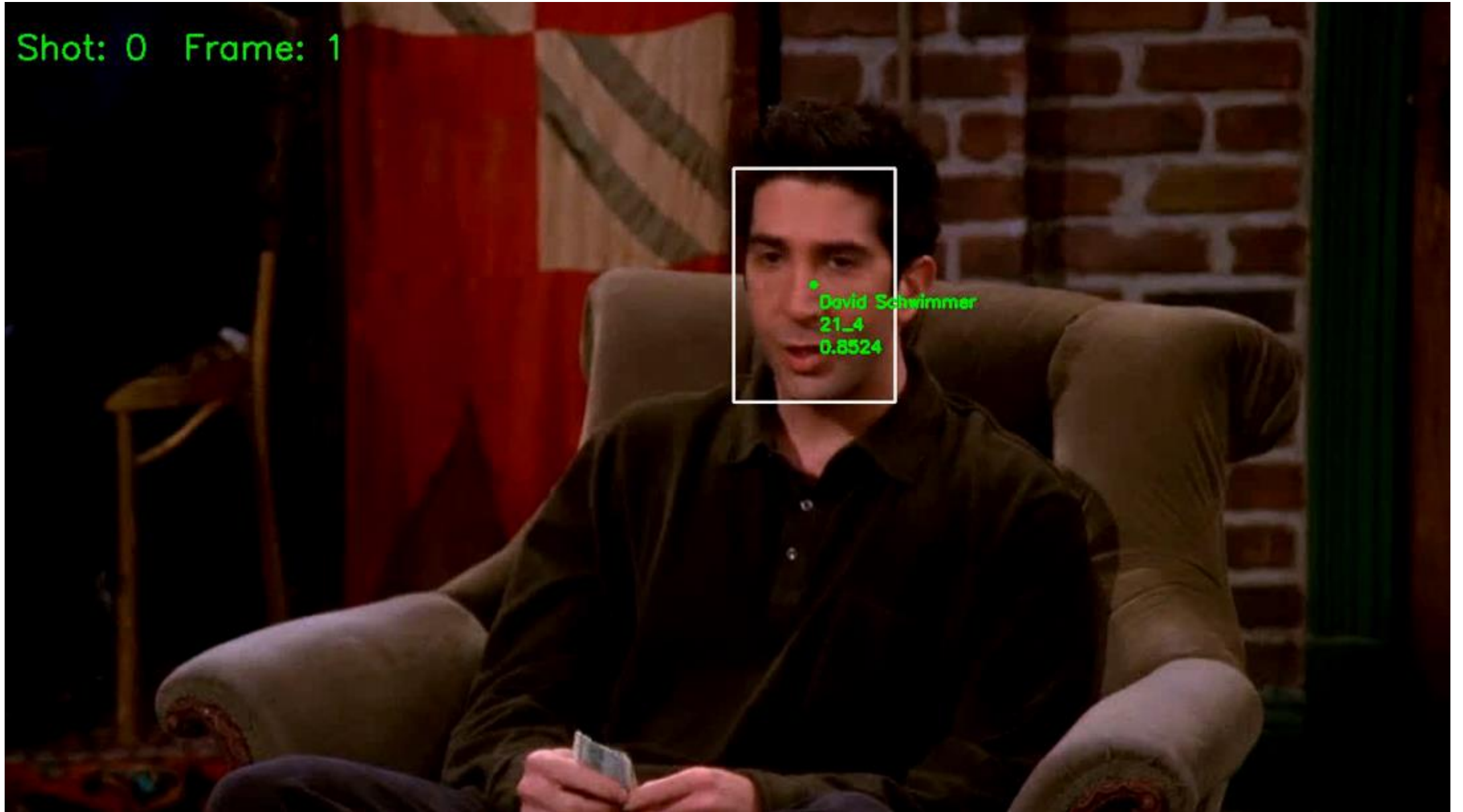
Outline

- 👤 What?
- 🎯 What for?
- 🔧 So what?
 - ★ STAR pipeline
 - 📁 STAR dataset
 - 📊 Experiments
- 👏 Now what?

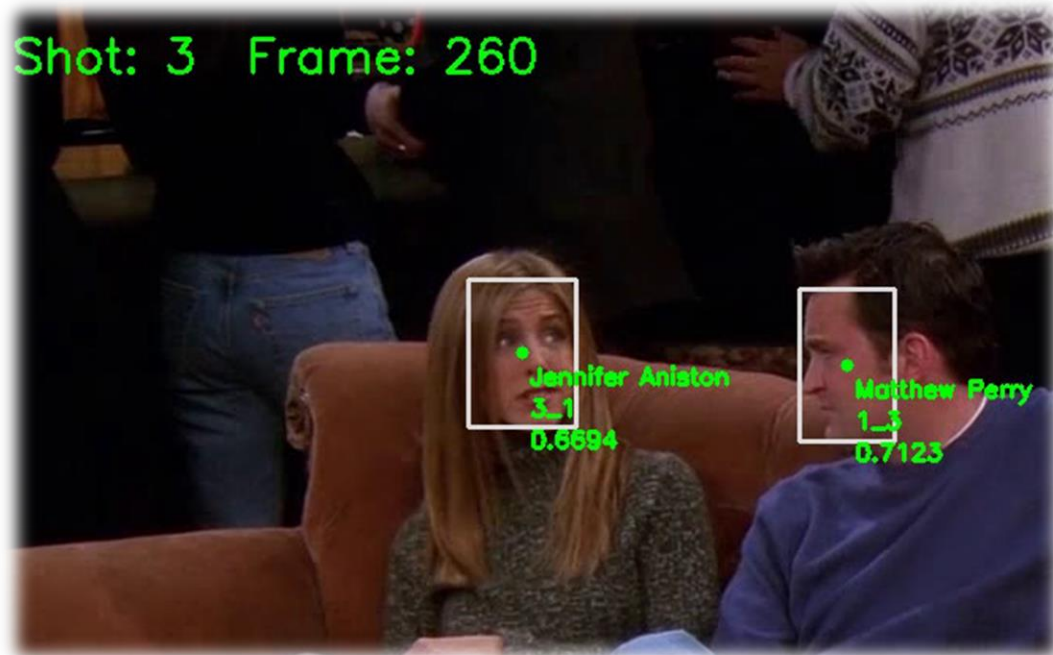
STAR: Screen Time and Actor Recognition in Video Content



What?



What?



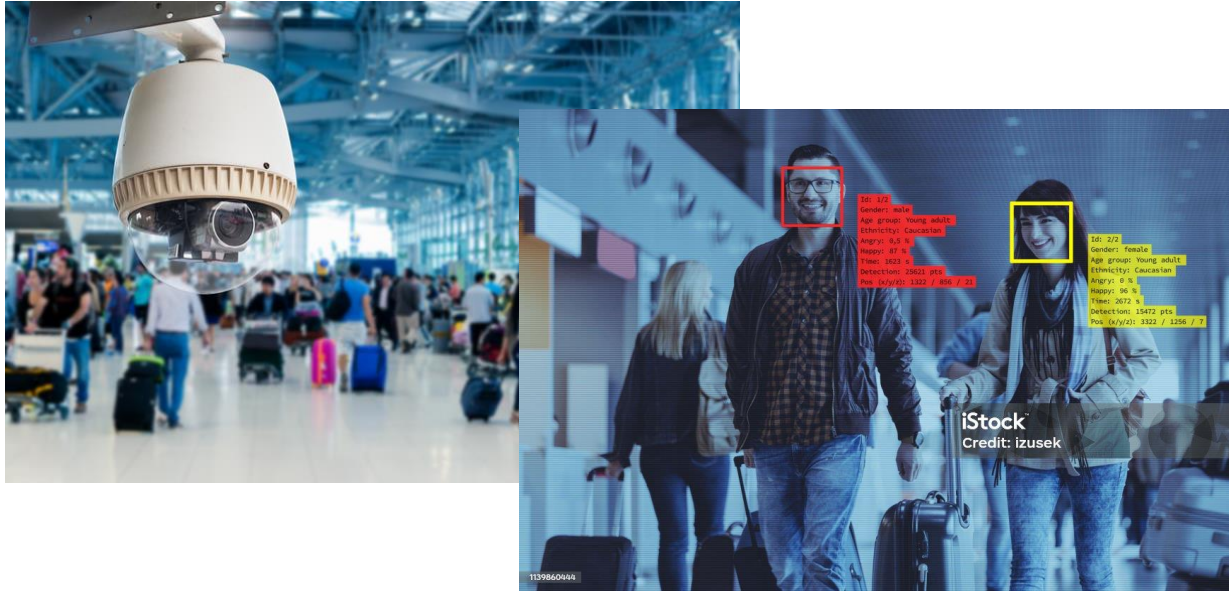
Actor Presence

Jennifer Aniston: YES
Matthew Perry: YES
Tom Hanks: NO

Actor Screen Time

Jennifer Aniston: 30.1%
Matthew Perry: 31.9%
Tom Hanks: 0%

What for?



Actor Presence

Jennifer Aniston: YES
Matthew Perry: YES
Tom Hanks: NO

Actor Screen Time

Jennifer Aniston: 30.1%
Matthew Perry: 31.9%
Tom Hanks: 0%

NETFLIX





So What?

7

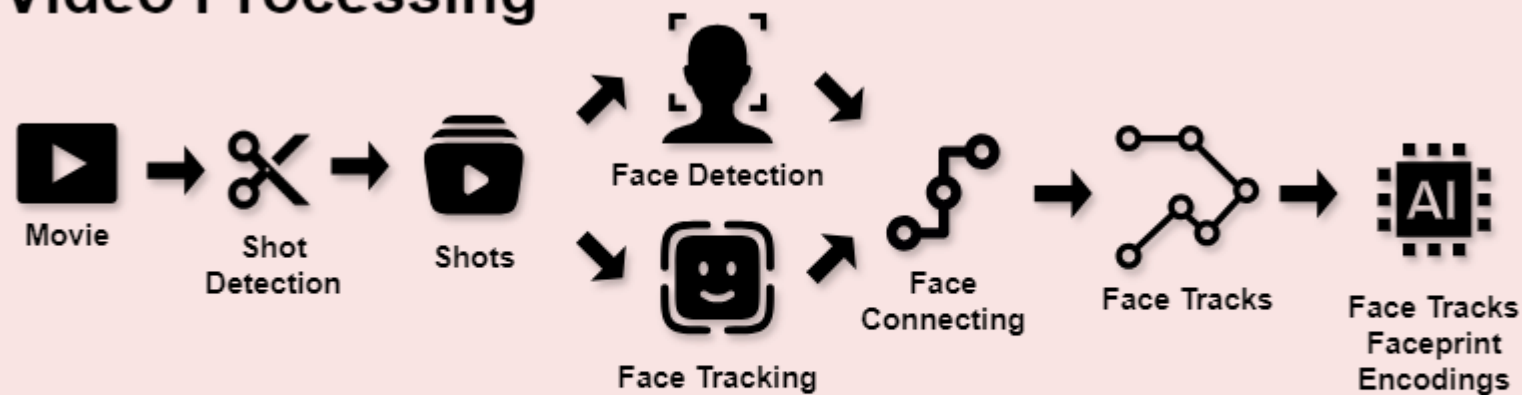
26.04.
2024

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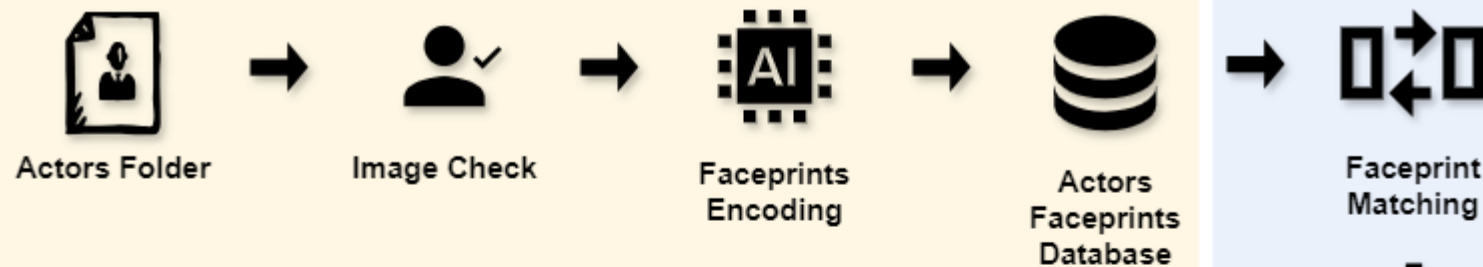


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Video Processing



Faceprints Generation

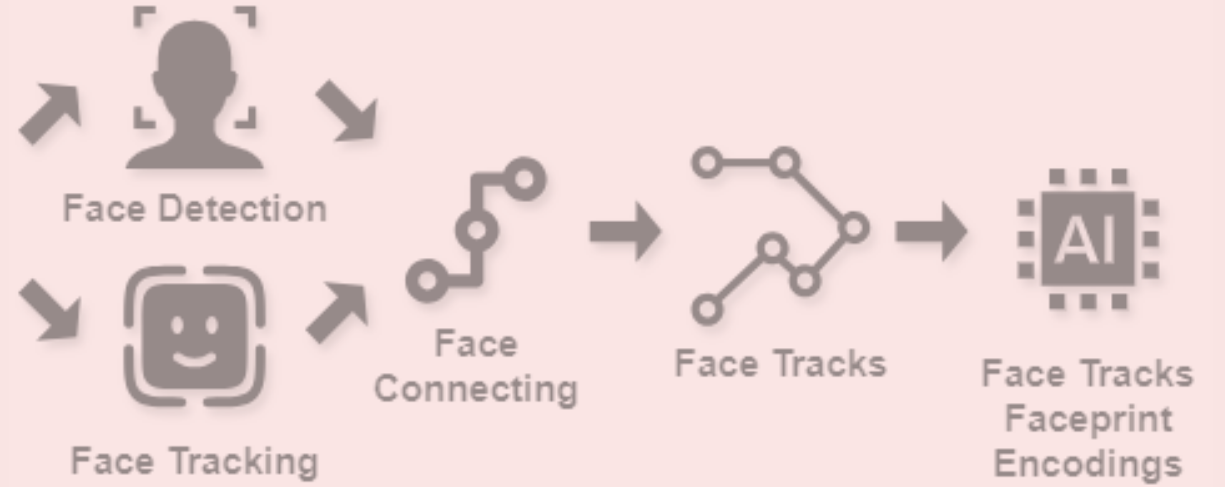
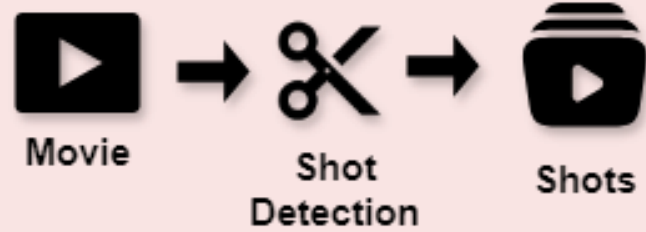


Actor Recognition



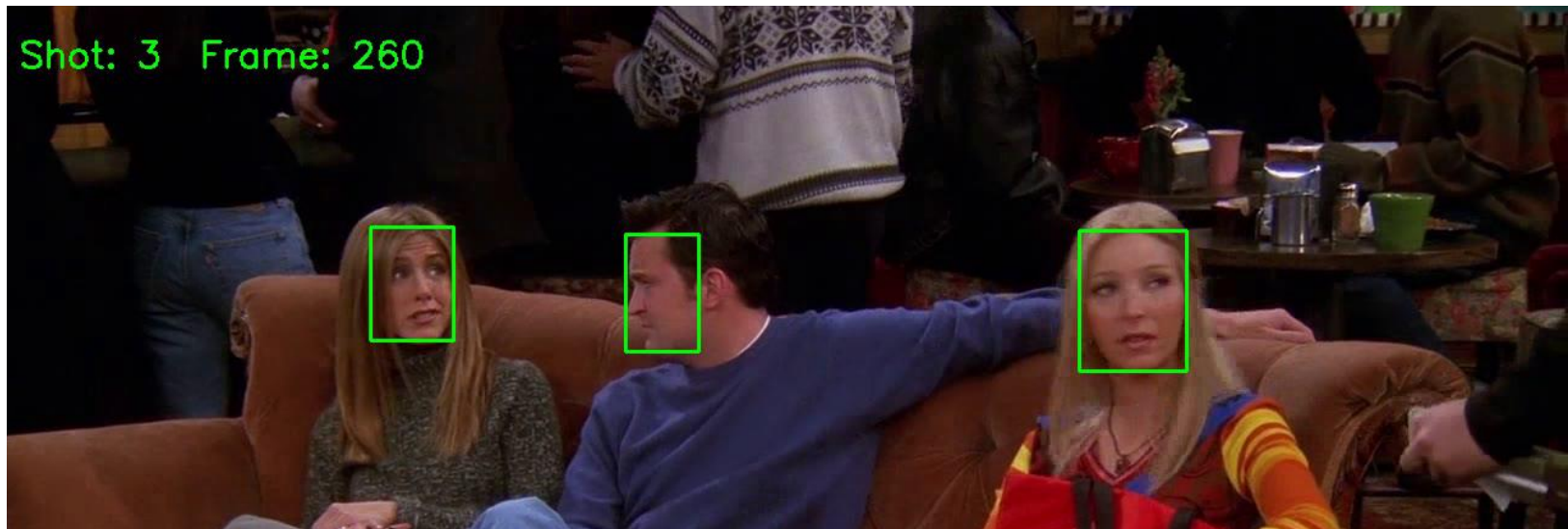
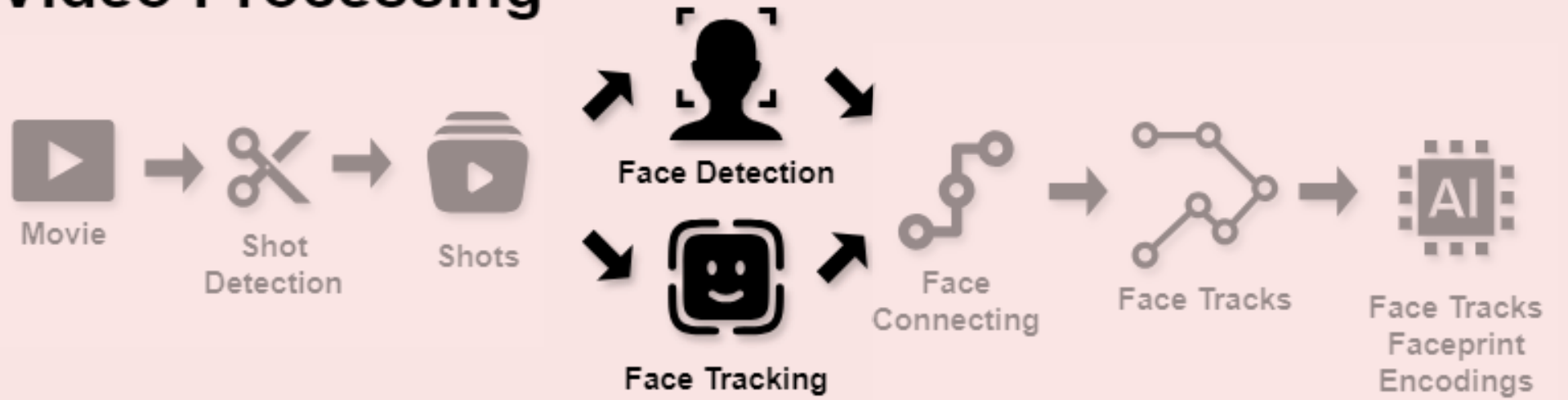
STAR

Video Processing



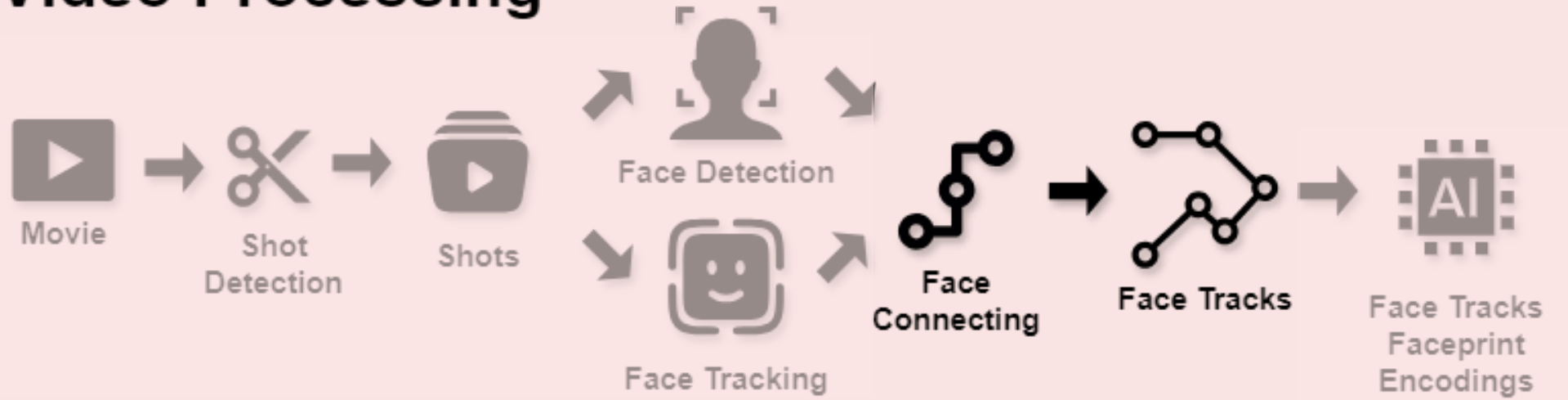
STAR

Video Processing



STAR

Video Processing



Last faces of existing face tracks

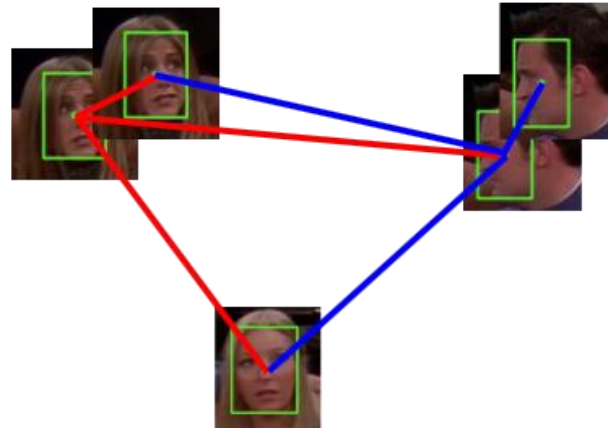


Face Track #1



Face Track #2

New detections



Updating and registering face tracks



Face Track #1



Face Track #2

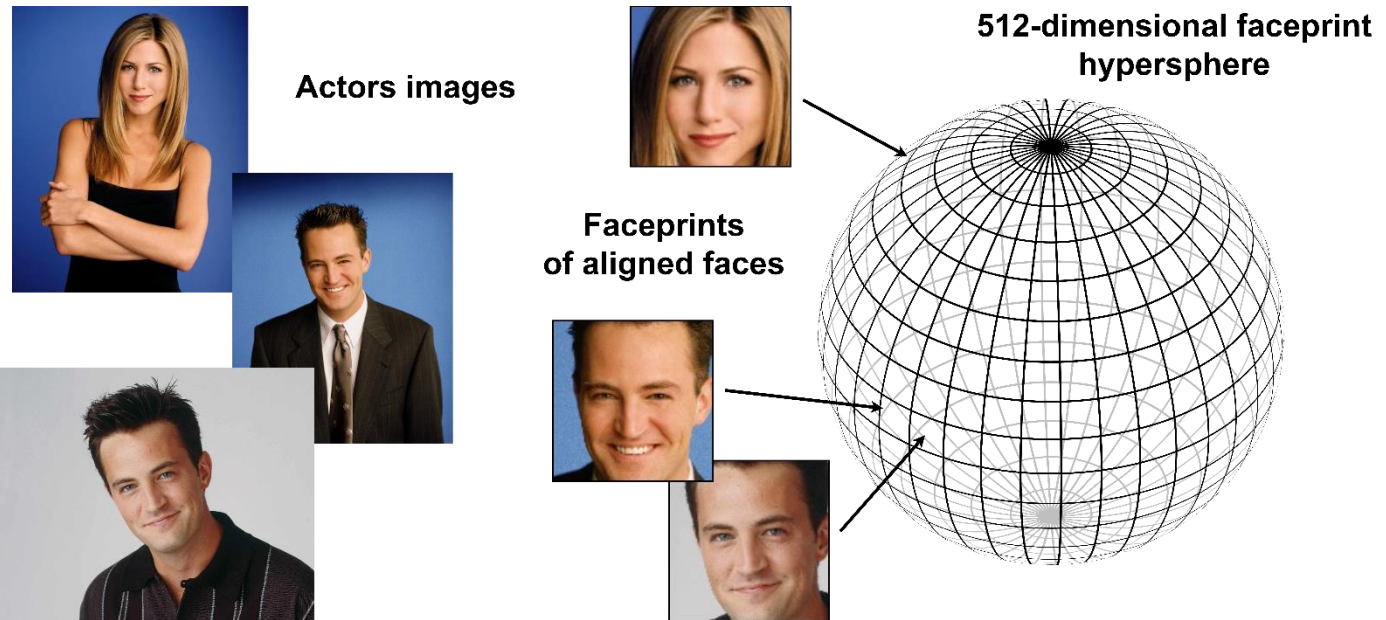
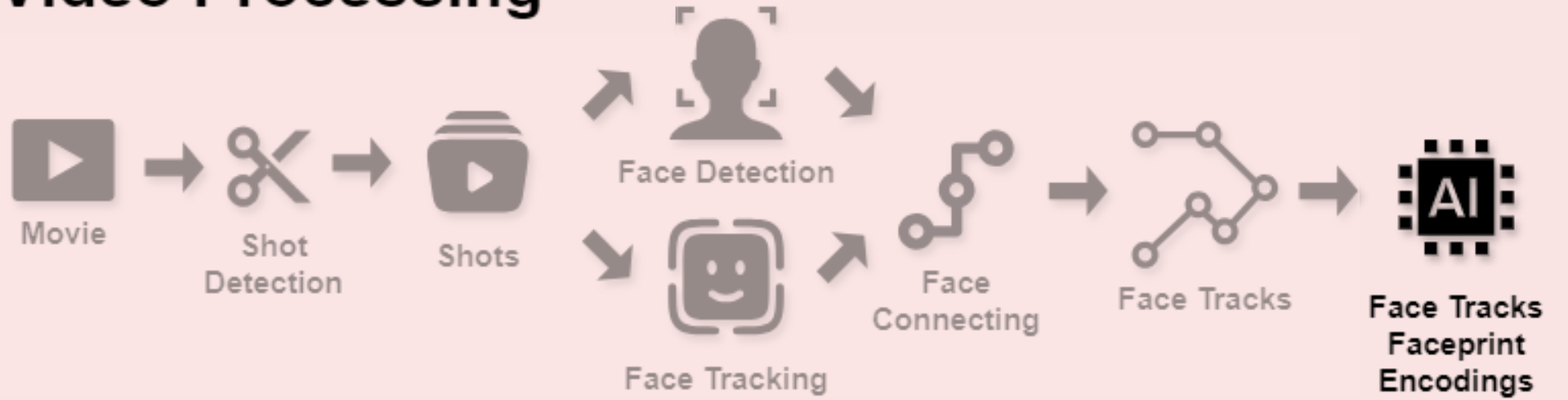


Face Track #3



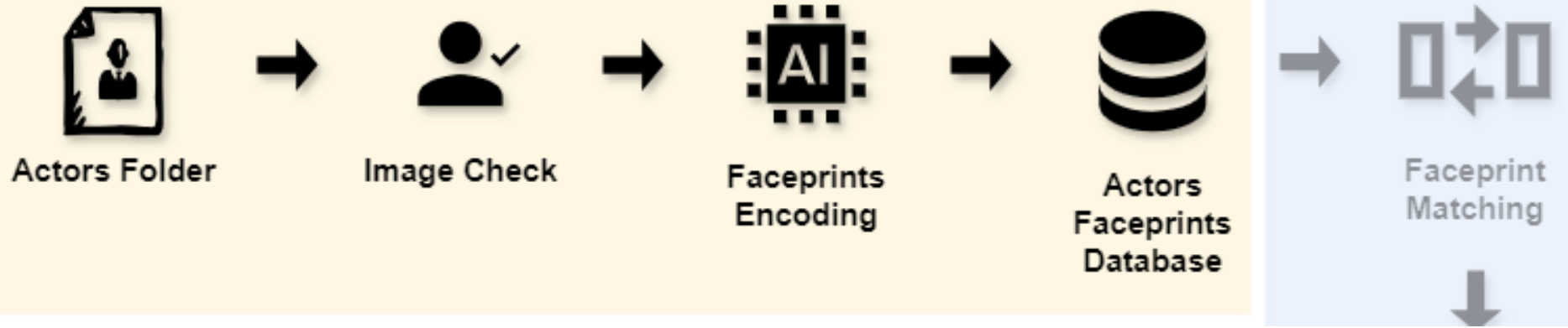
STAR

Video Processing



STAR


Faceprints Generation



Actor Database


Friends

Jennifer Aniston

 01.jpg



checked

 02.jpg



checked



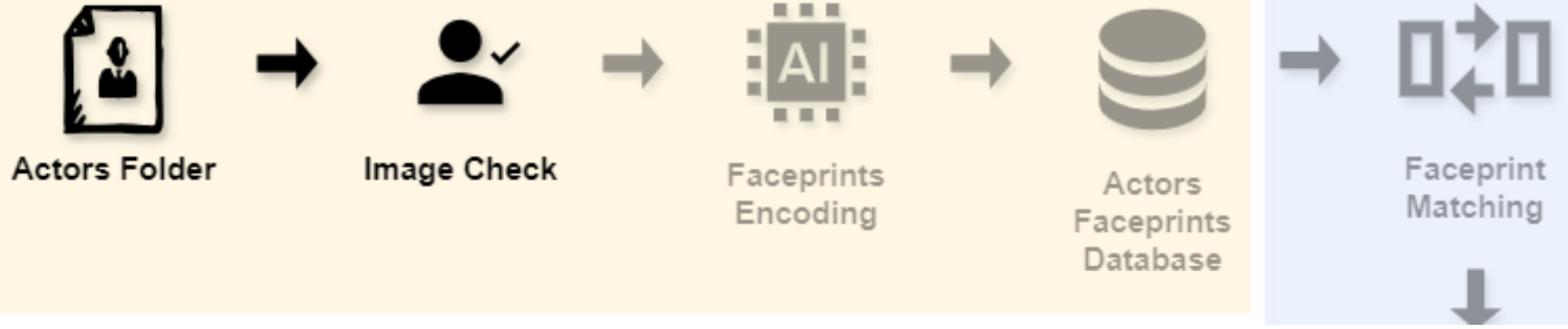
Faceprint encoding

Matthew Perry

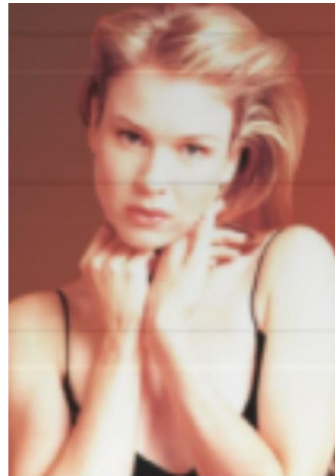


STAR

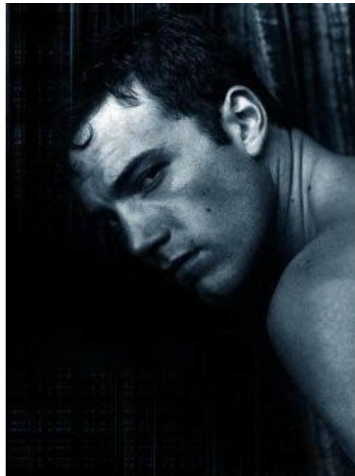
Faceprints Generation



Color issue



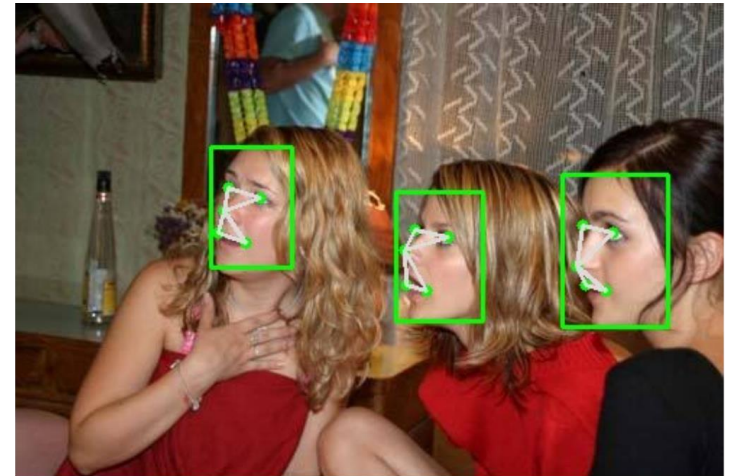
Corrupted



No face detected



Small face

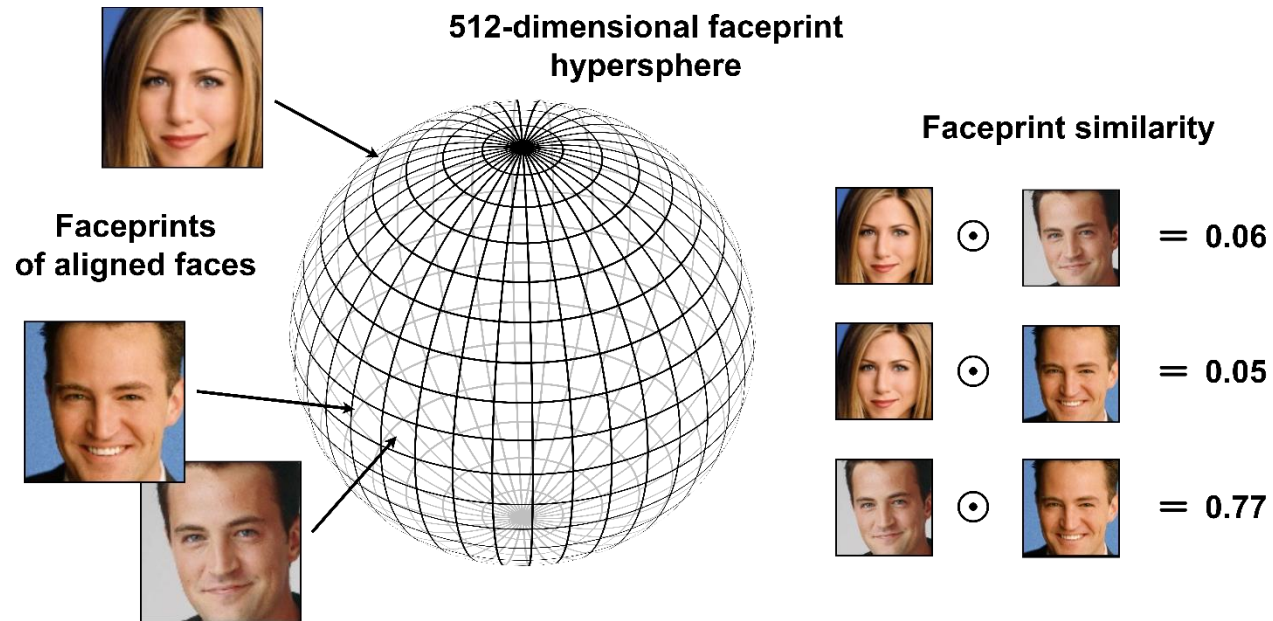
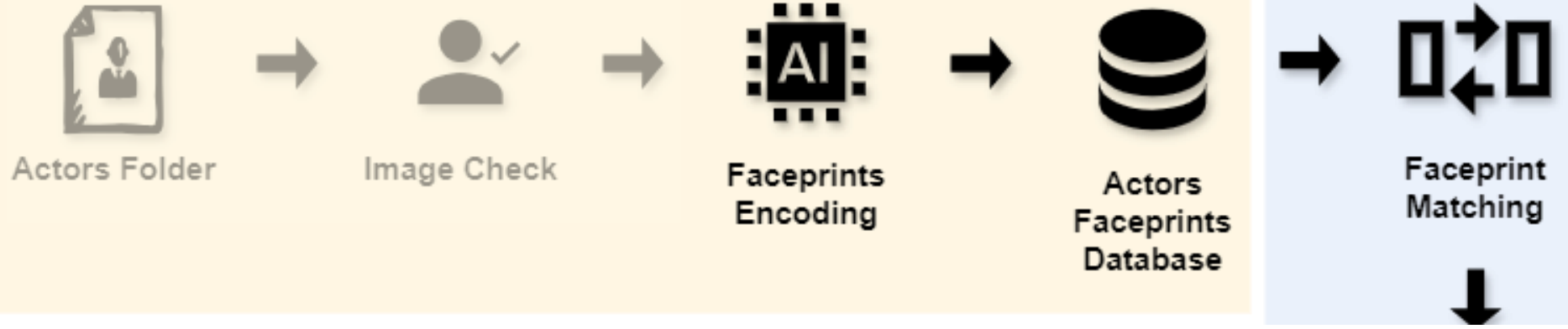


Multiple faces



STAR

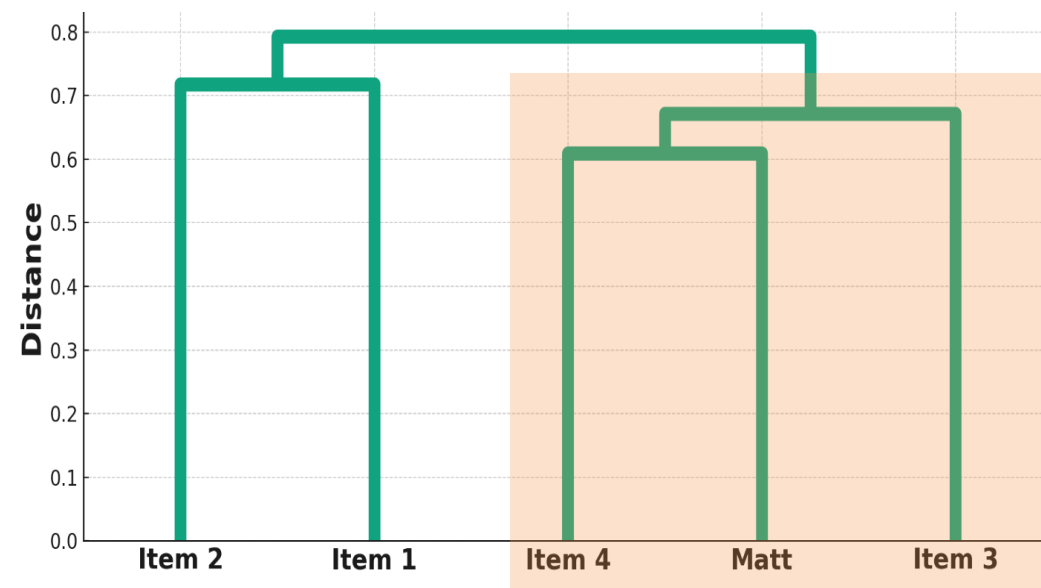
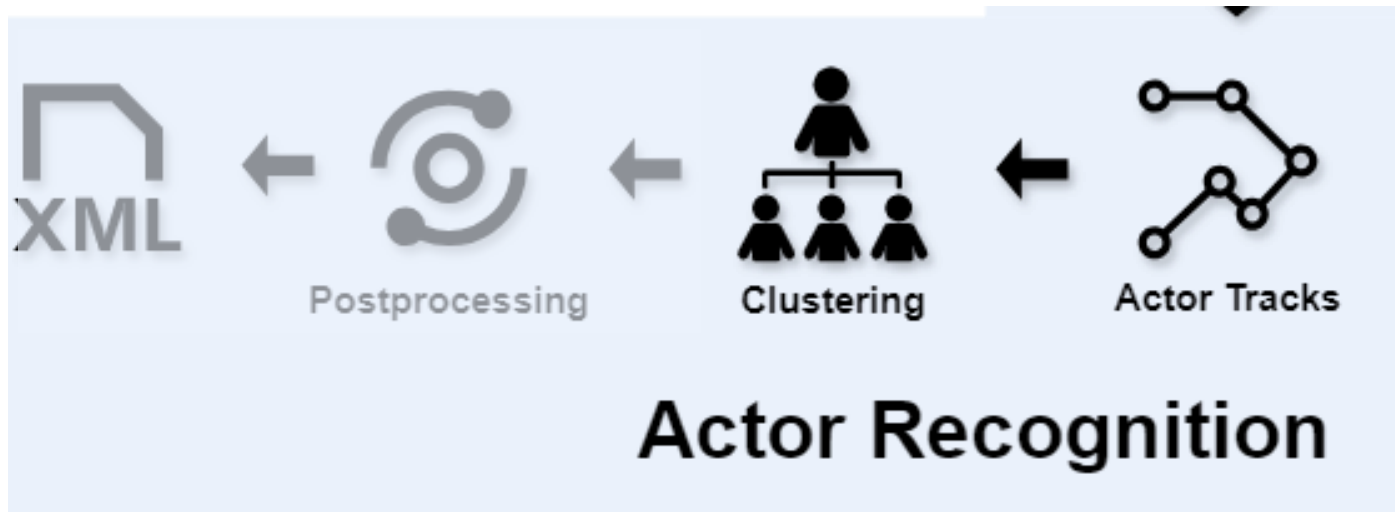
Faceprints Generation



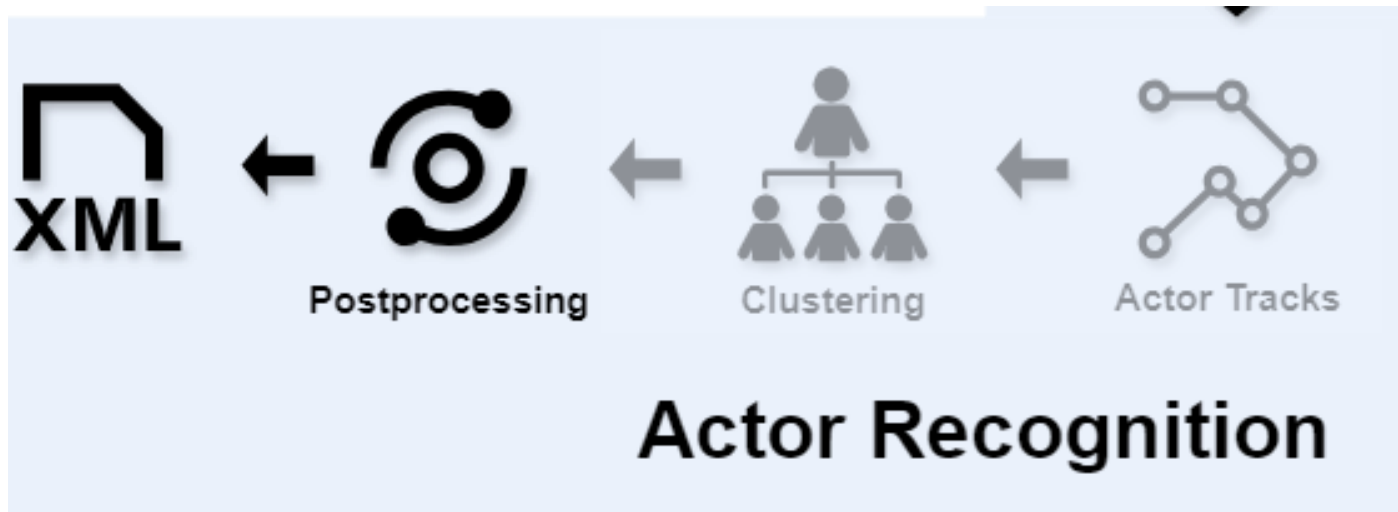
STAR



STAR



STAR



▼ <root>

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▶ <actor actorID="3"  
  avgscore="0.6963585667859309"  
  fantom="1_3" frames="166"  
  fullname="Matthew Perry"  
  percentage="0.31861804222648754"  
  shotFrames="166">
```

...

```
▶ <actor actorID="6"  
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  fullname="Matt LeBlanc"  
  percentage="0.418426103646833"  
  shotFrames="218">
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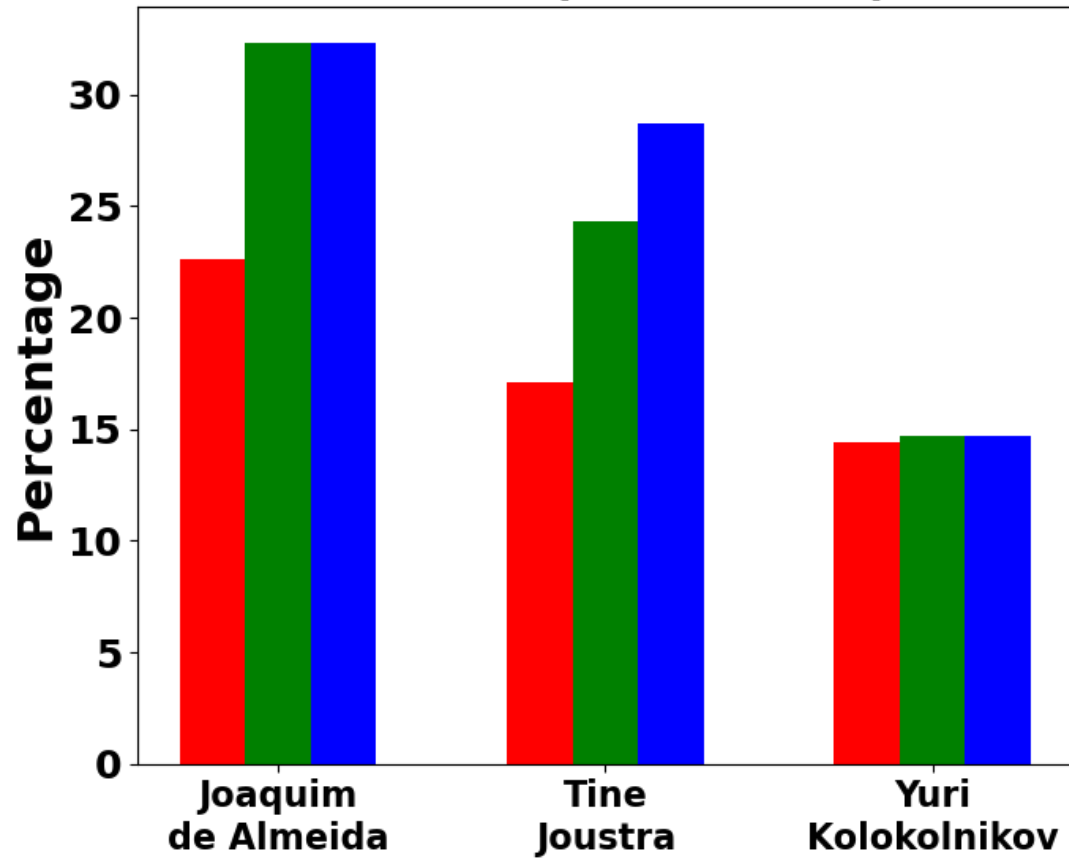
...



Screen time



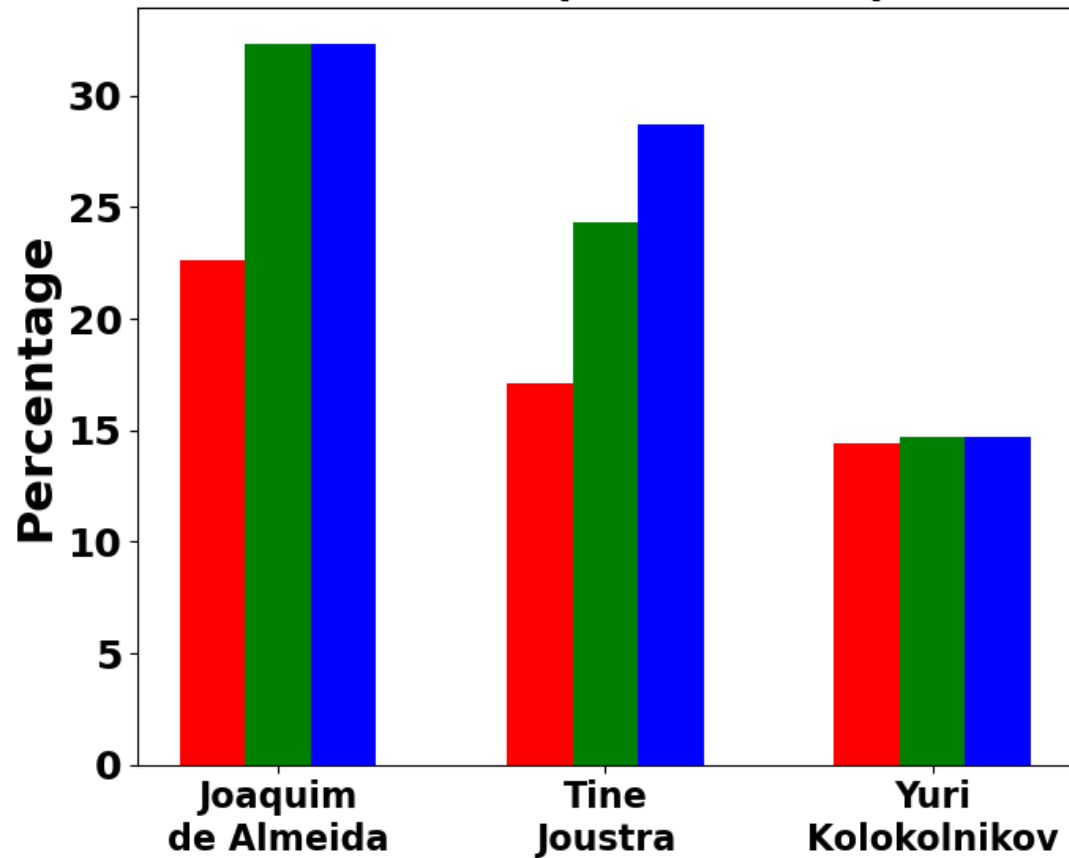
Scene 1 (Non-action)



Screen time



Scene 1 (Non-action)



For additional experimental results
and information, please contact
kerepecky@utia.cas.cz



Now What?

★ STAR pipeline

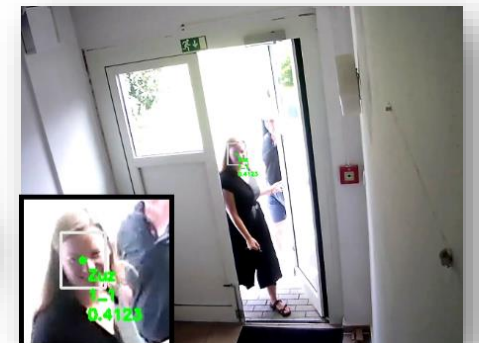
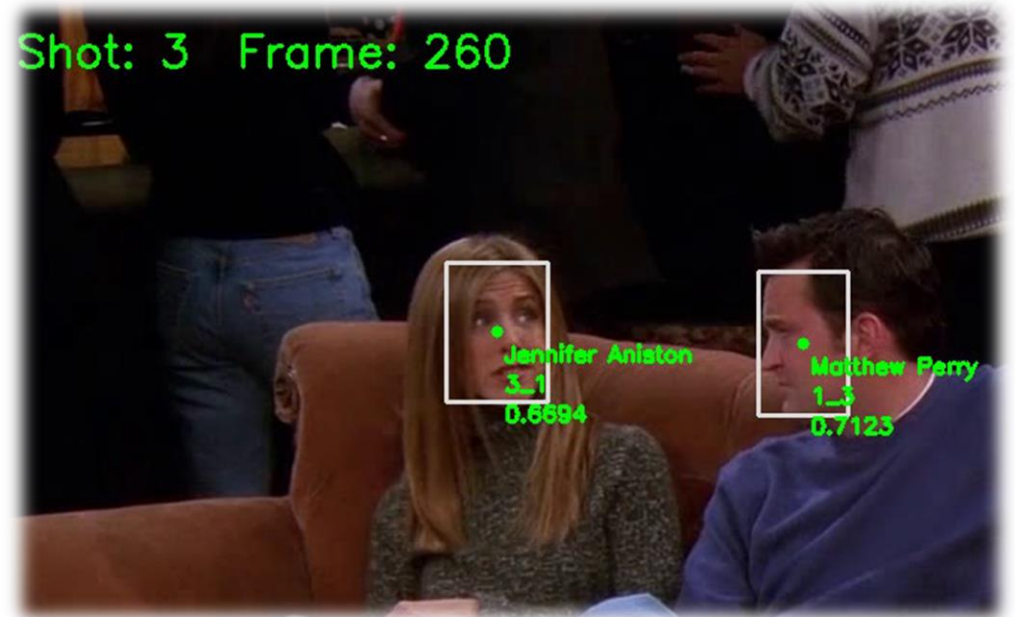
📁 STAR dataset

🔍 Face detector

MTCNN, YOLO, Dlib,...

👁️ Face recognition

ArcFace, CosFace, SphereFace...



Thank you!

kerepecky@utia.cas.cz

