

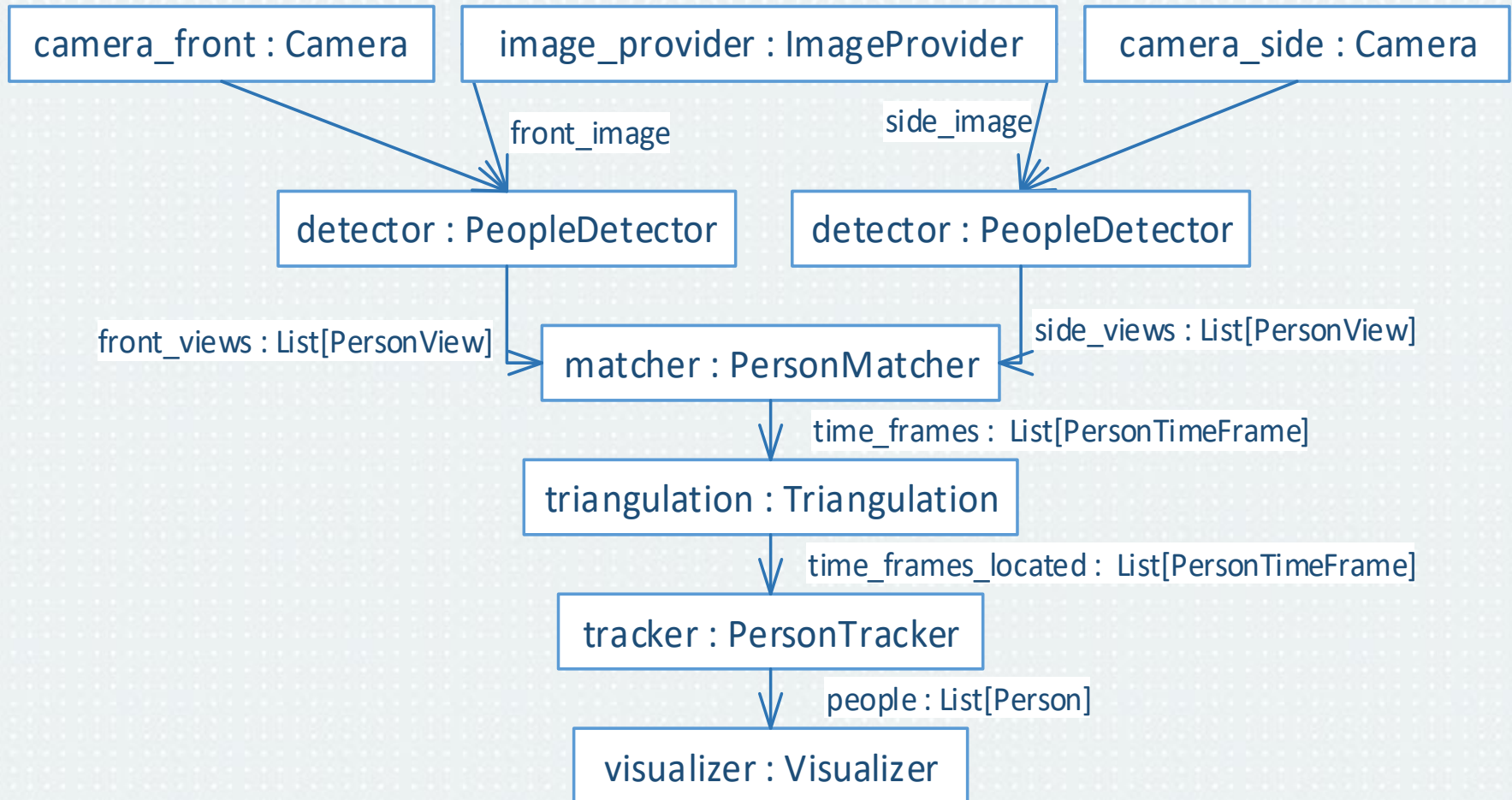
Pedestrian tracking

VUT FIT POVa

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4. 1. 2019

Processing pipeline



Human detection in 2D

- OpenPose deep neural network
- Pretrained model with COCO dataset
- Left hip, right hip, neck -> bounding box

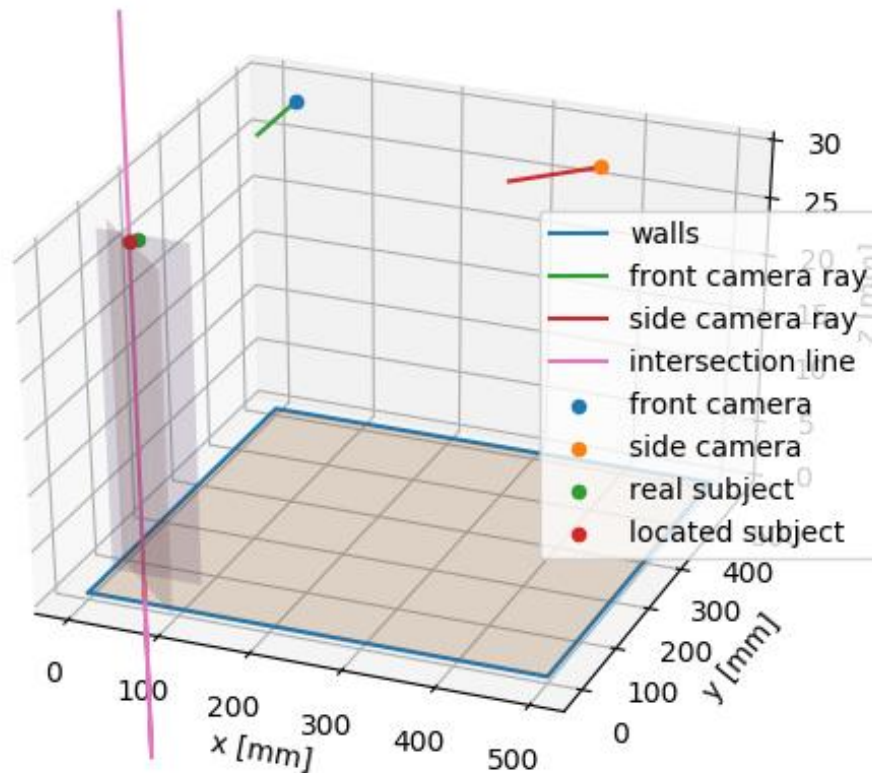
Person view matching

- Same person captured by multiple cameras at the same time
- Image histograms

Triangulation

- Distance calculation based on height of average person's torso
- Distance planes in 3D
- Intersection of two planes -> person's position

Triangulation



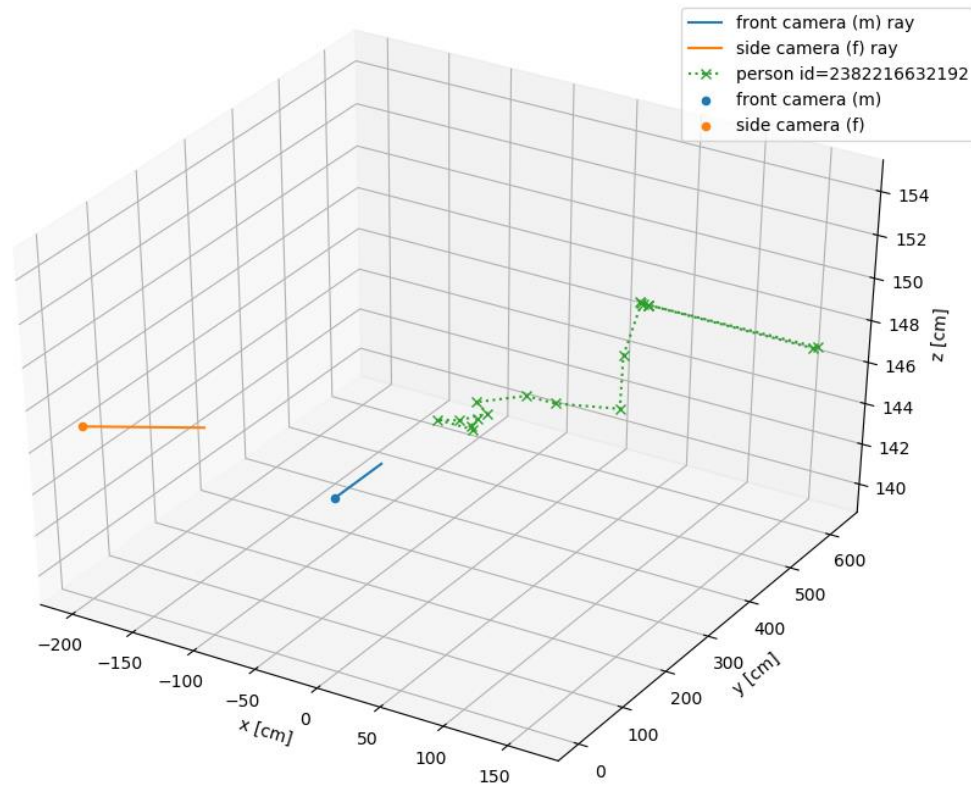
Person tracking

- Based on image histograms

Visualisation

- Shows position and orientation of cameras and path of all tracked people
- User interaction in a separate thread

Visualisation

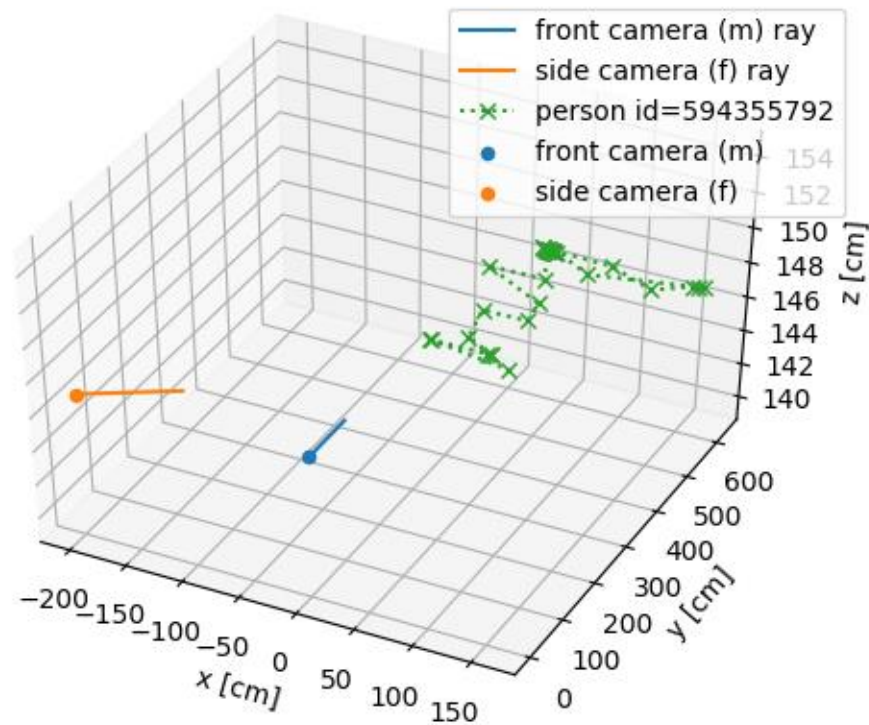


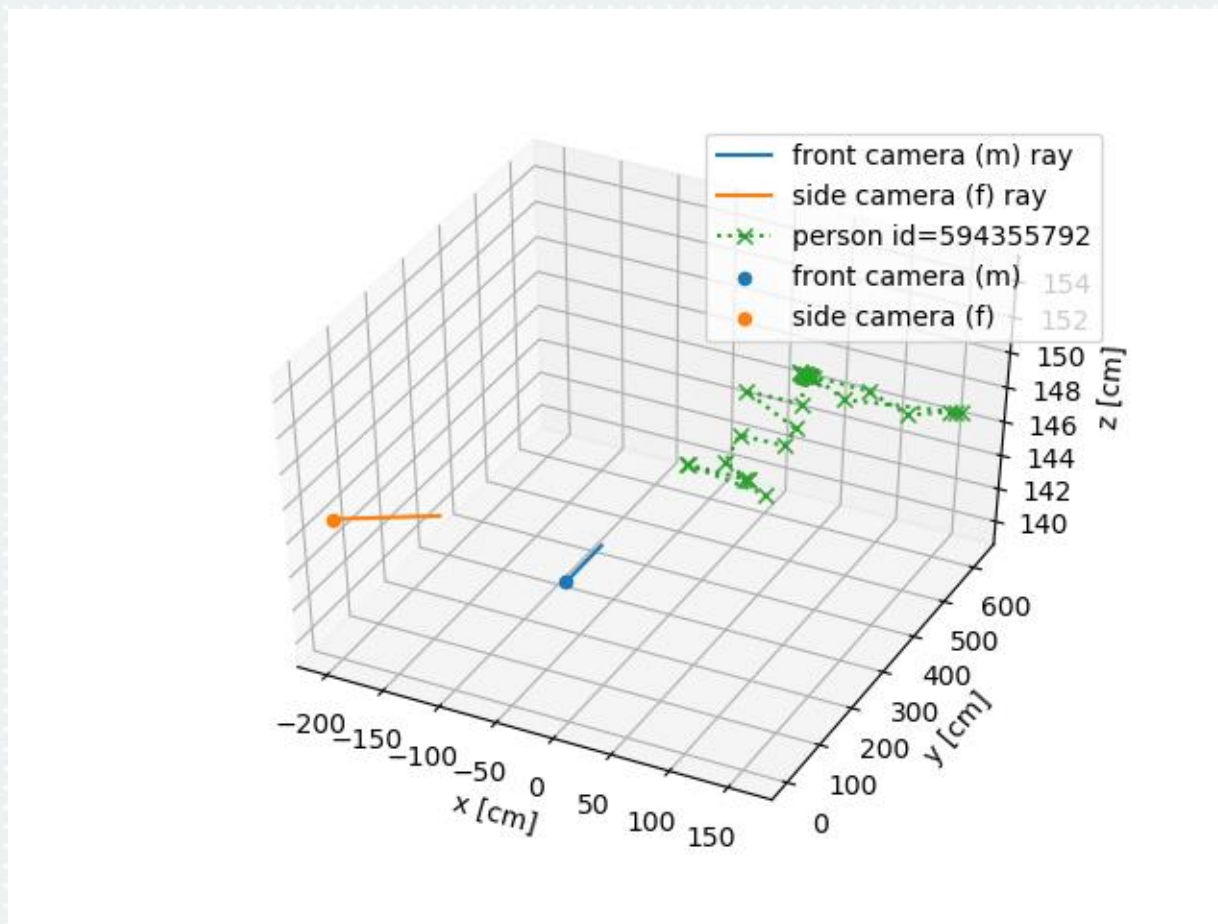
Test data

- Own images, COCO dataset for OpenPose



Evaluation





Thank you for your attention.