Assessing the suitability of a video camera for face identification

Client: **Qwirit**

Client email: info@qwirit.com

Use case: **Safe city**

Number of people identified: **351**

Faces analyzed quality: **327**

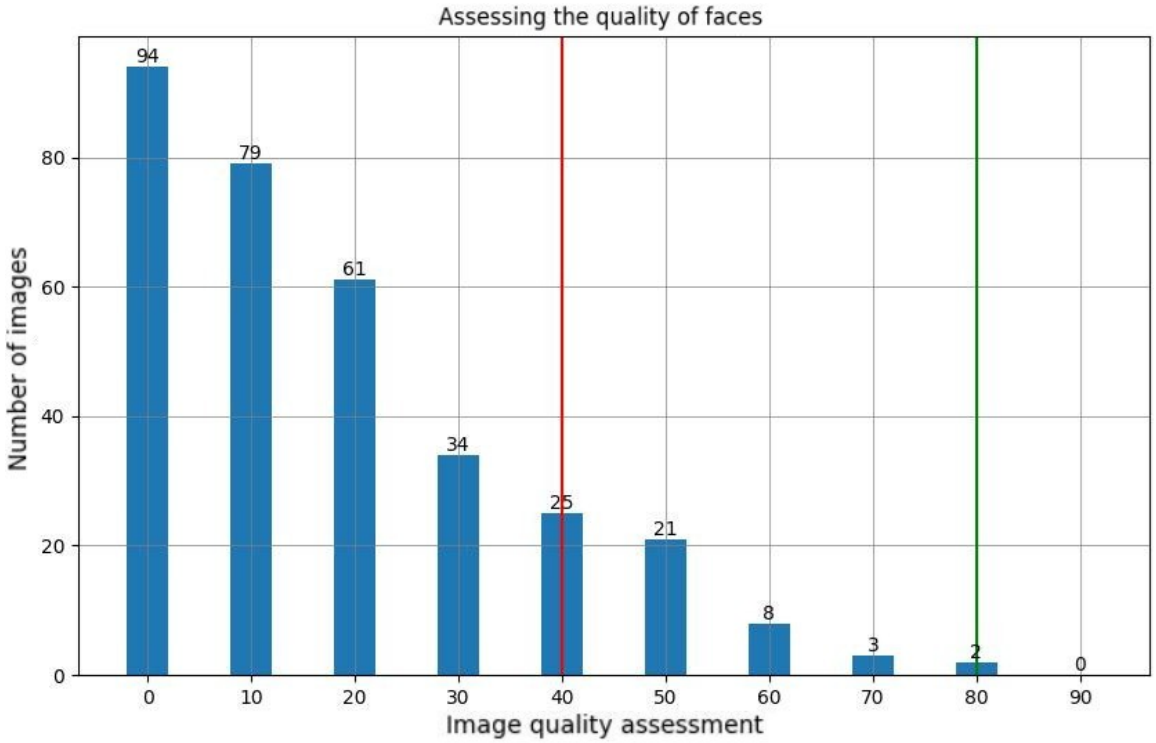
Camera resolution: **2688x1520px**

Video length: **03:26:49**

Camera performance (proportion of faces that can be confidently recognized)

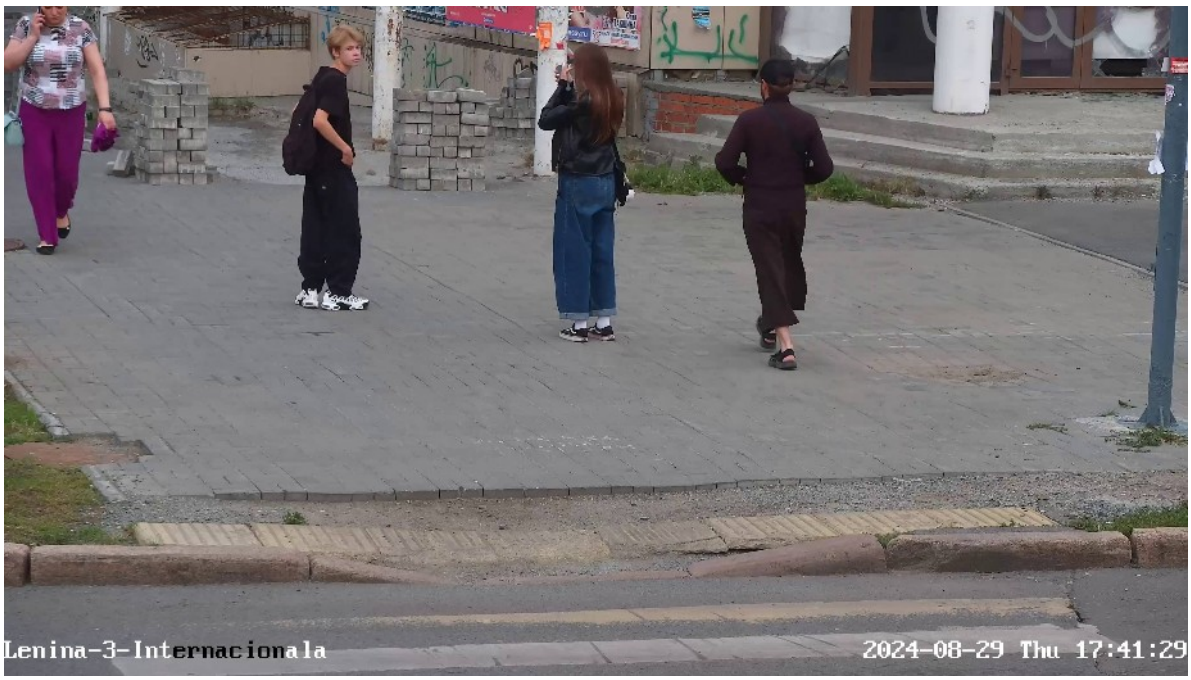
Conclusion: the quality of the video stream does not meet the conditions for correct face recognition

Quality Score Distribution Graph



Size of faces relative to the full frame

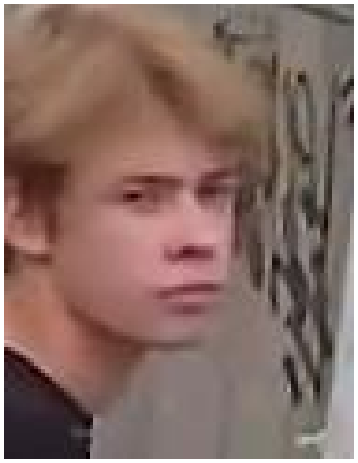
Conclusion: 99% of faces have a size < 5.0% relative to the frame size, some faces may not be detected, recommended: move the camera closer, increase the zoom, change the lens, crop the frame image (using OMNI-agent) to a resolution of 1280 x 720, excluding the background

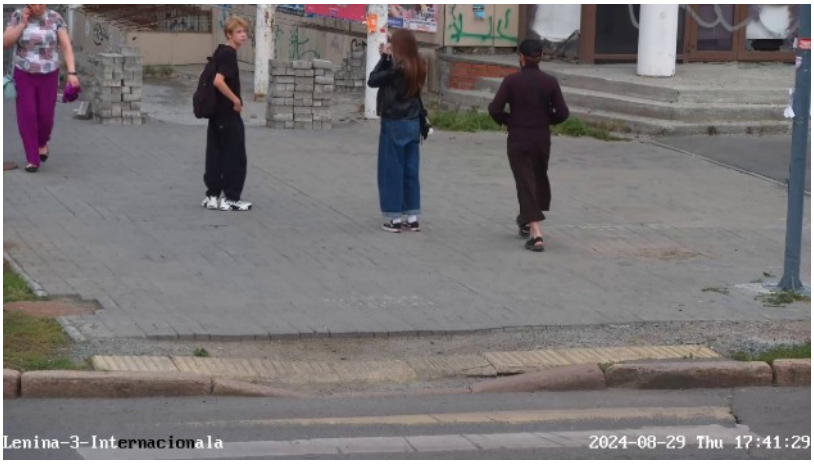


Distance between eyes

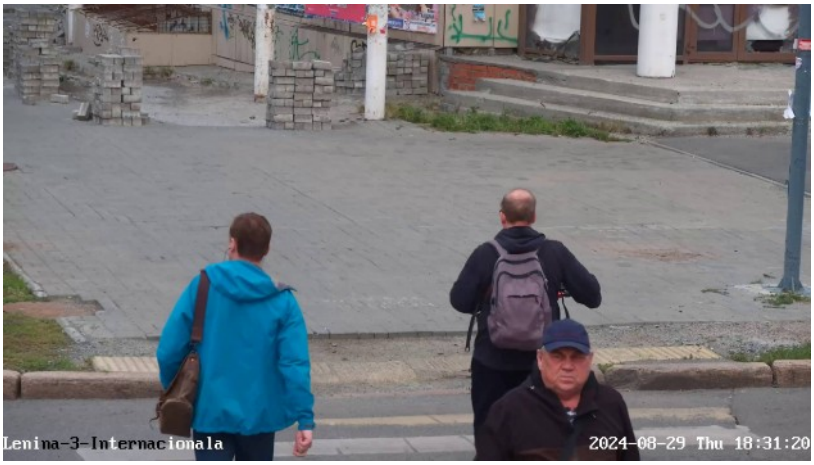
Conclusion: 66% of faces have a distance between the eyes < 35 pixels, recommended: move the camera closer, increase the zoom, change the lens, increase the image resolution

Min: 19px





34% of faces: more than 35px

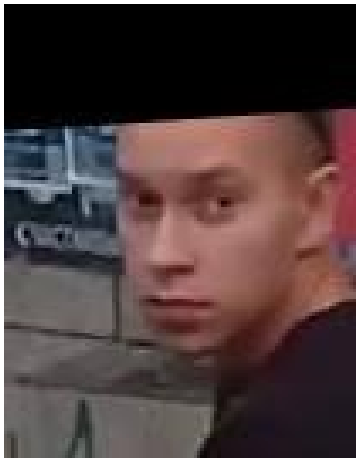


Max: 68px

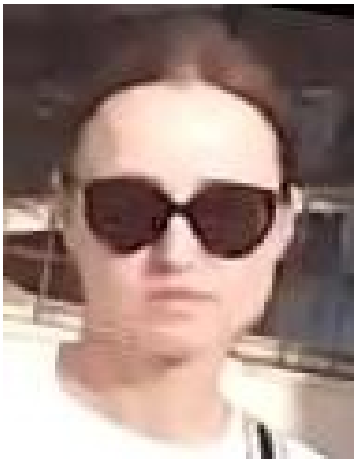
Head rotation angles left/right:

Conclusion: 87% of people have a head rotation angle < 20° from the frontal position - the camera position is optimal for face recognition

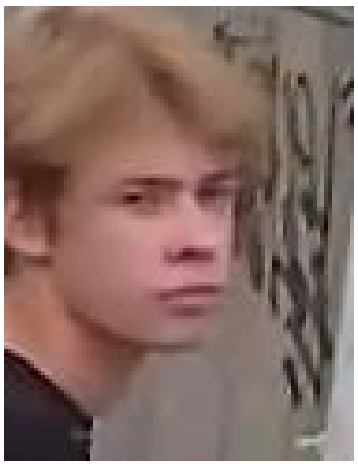
Max left: 29°

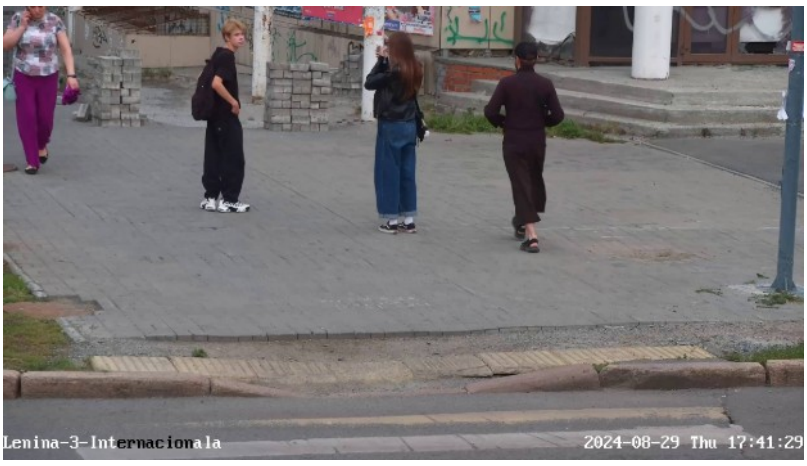


87% of faces: head turned < 20°



Max right: 34°

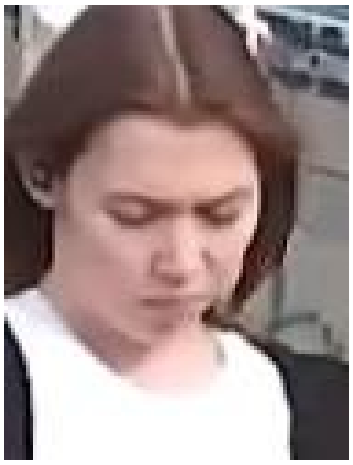


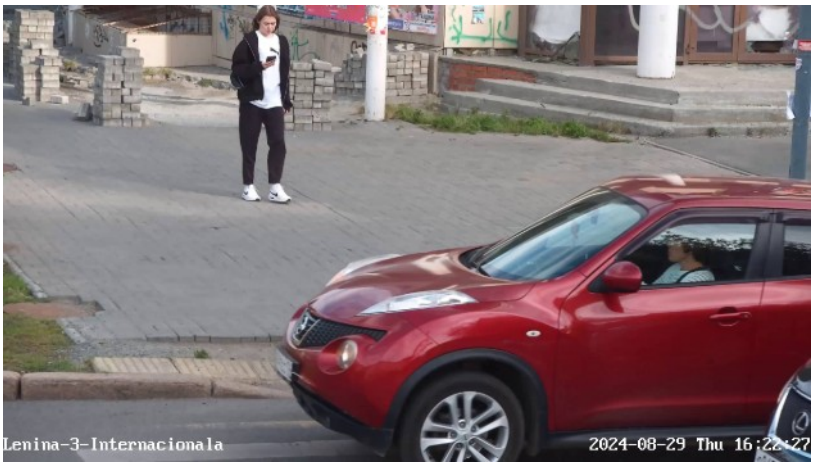


Head tilt angles up/down

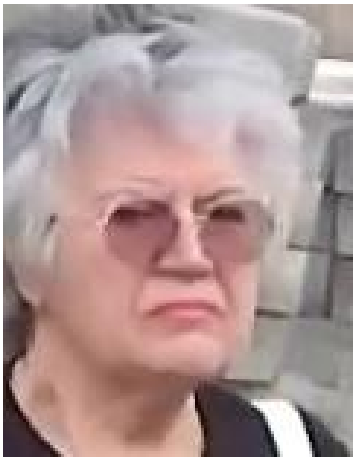
Conclusion: 55% of faces have a head tilt angle > 20° from the frontal position, it is recommended to: lower the camera, increase the distance to the face identification zone and increase the zoom

Max down: 39°

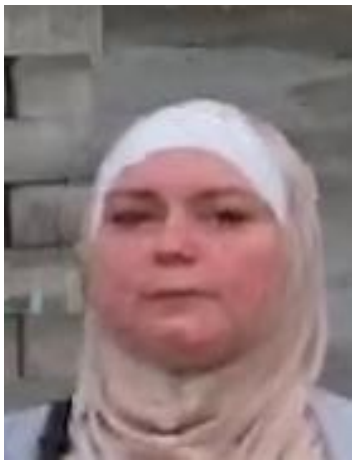


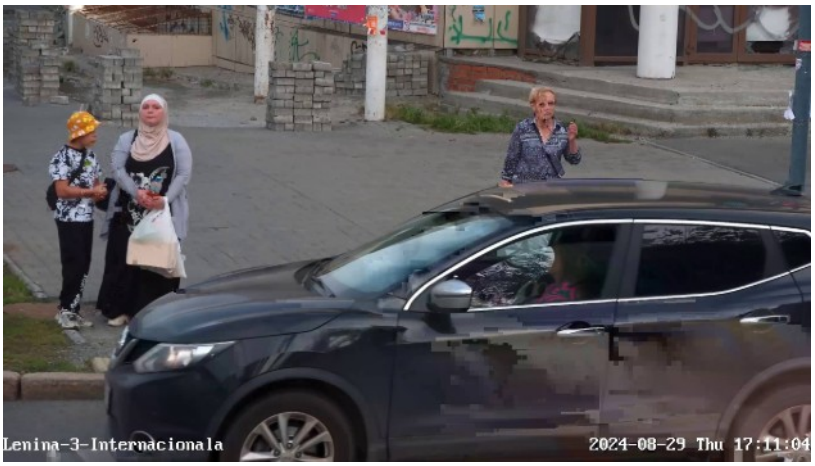


45% of faces: head turned < 20°



Max up: 1°

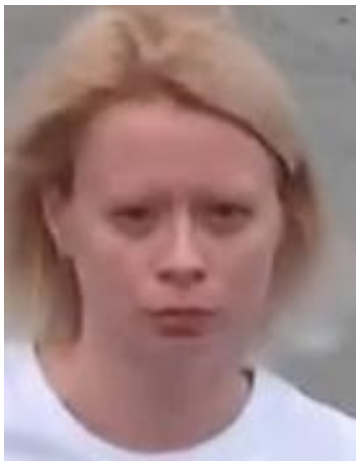




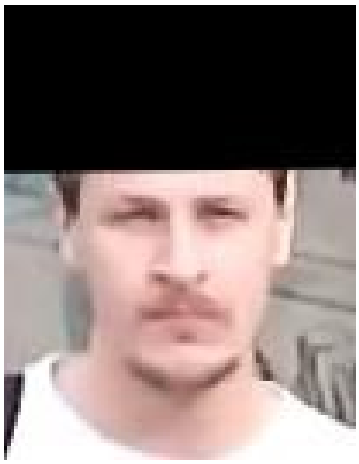
Sharpness Analysis

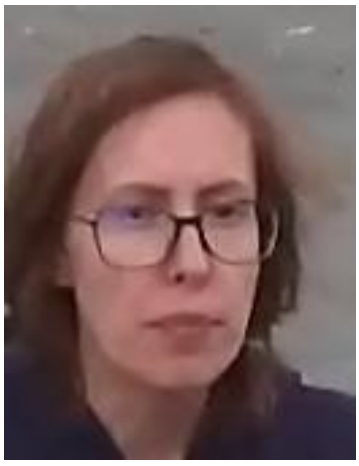
Conclusion: 85% of faces have image sharpness < 50.0%, recommended: adjust focus, turn off noise reduction and WDR, increase ISO, reduce shutter speed, add lighting in the identification area

Min: 9%



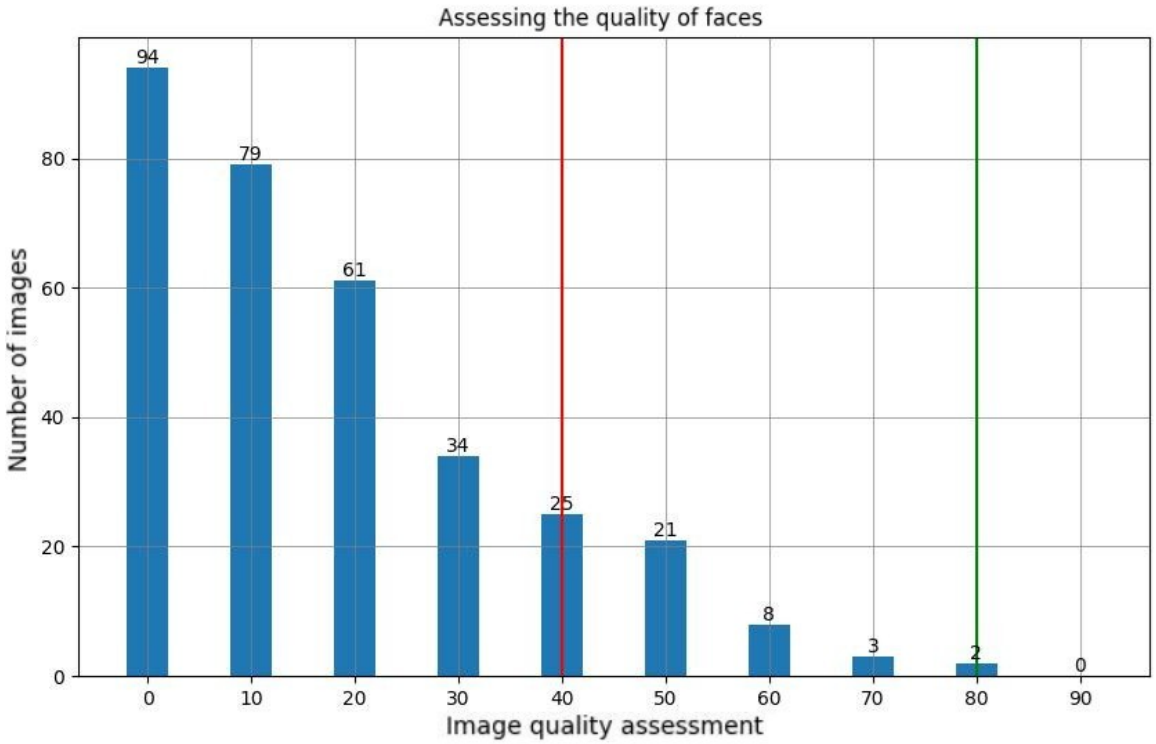
15% of faces: more than 50.0%



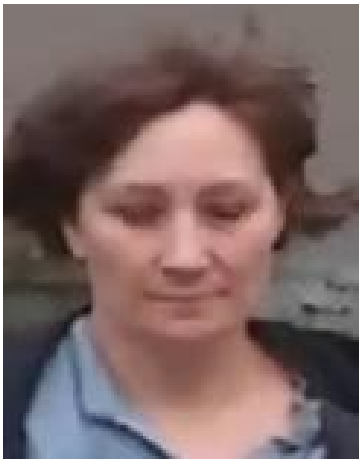


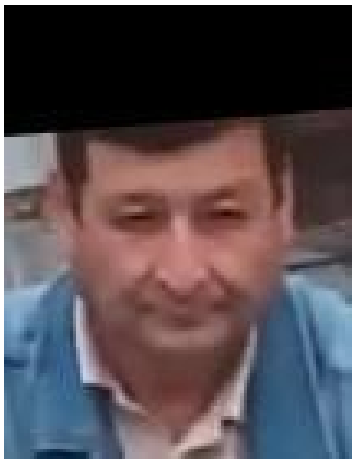
Max: 99%

Quality Score Distribution Graph

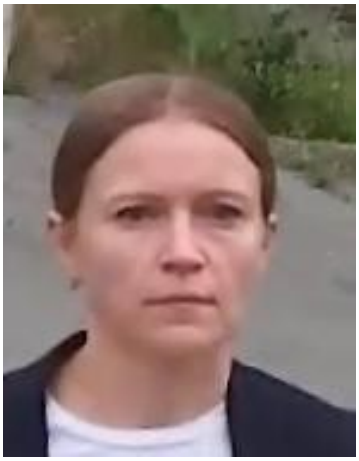


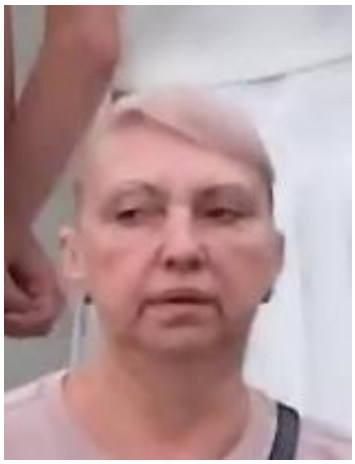
Examples of persons with quality: 0-40





Examples of people with quality: 40-80





Examples of people with quality: 80-100

Examples of persons not involved in quality analysis

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You can get more information and recommendations on setting up equipment for your task by e-mail face@3divi.com or via online call.

We pump up your expertise to save your resources.