



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: **384**

Faces analyzed quality: **368**

Camera resolution: **1920x1080px**

Video length: **23:10:30**

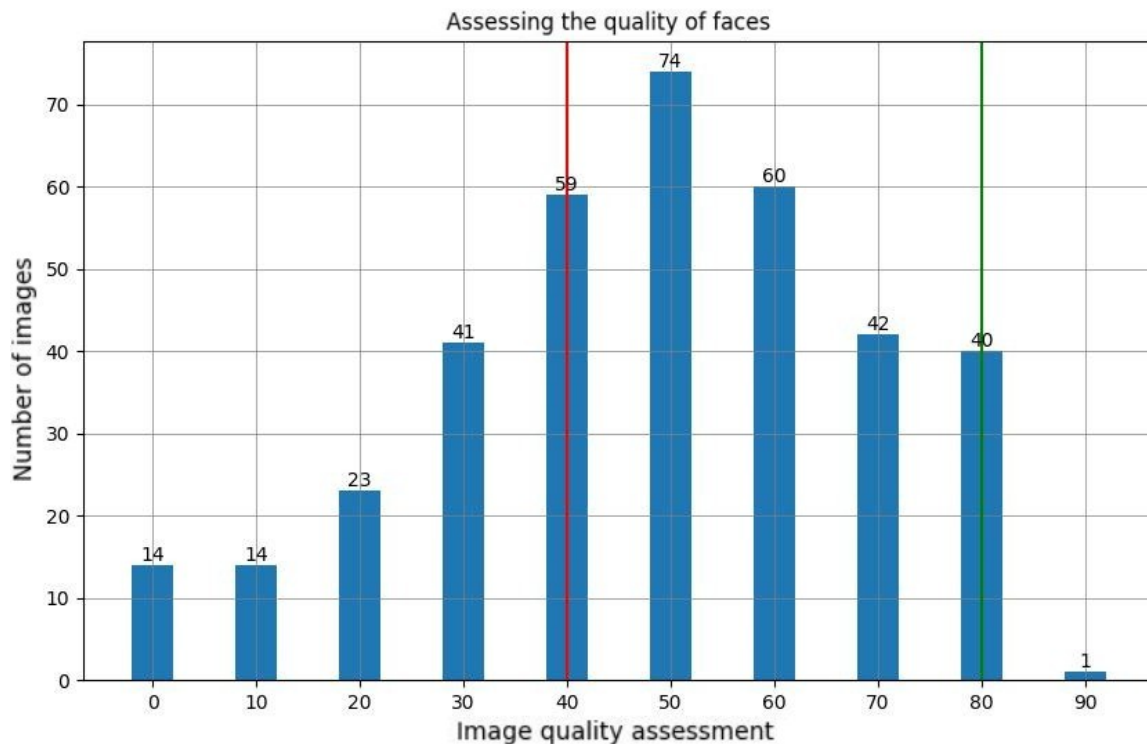


Camera performance (proportion of faces that can be confidently recognized)



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: 74% 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



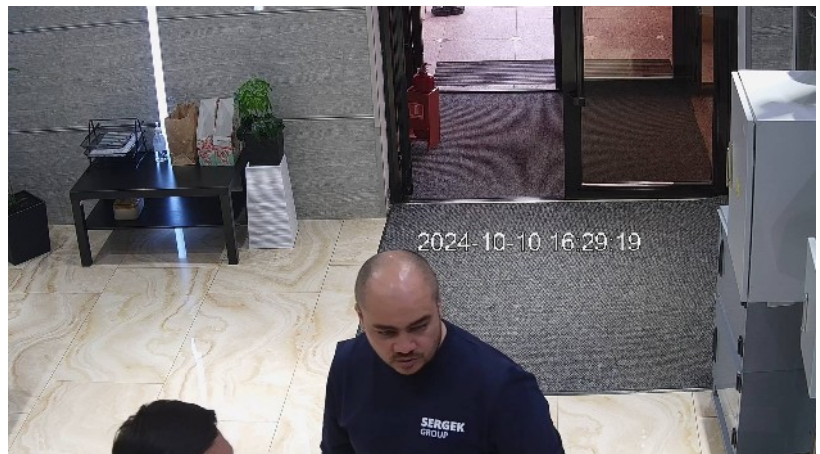
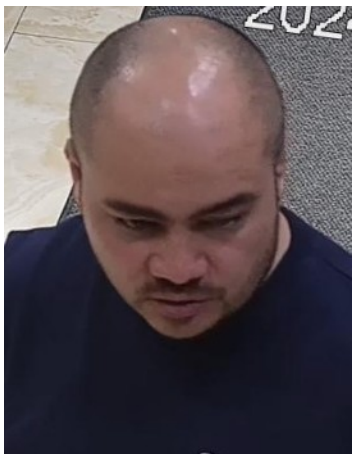
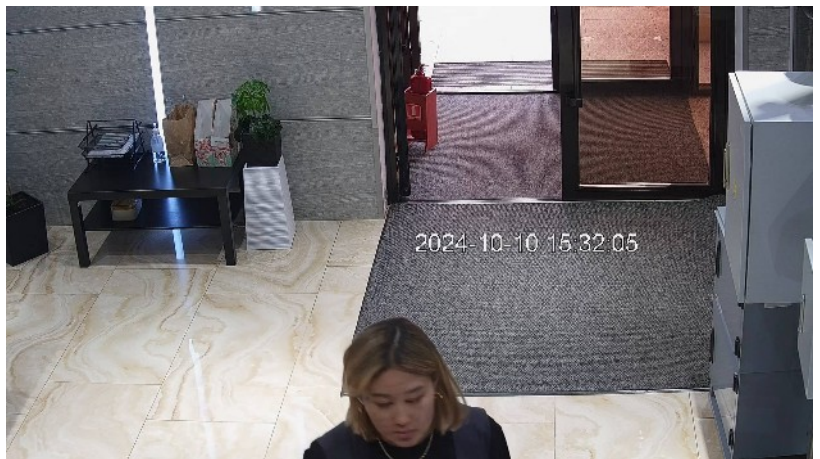
Distance between eyes

Conclusion: 95% of faces have a distance between the eyes > 35 pixels, the distance to the camera is sufficient and the quality of the video stream is satisfactory for face recognition

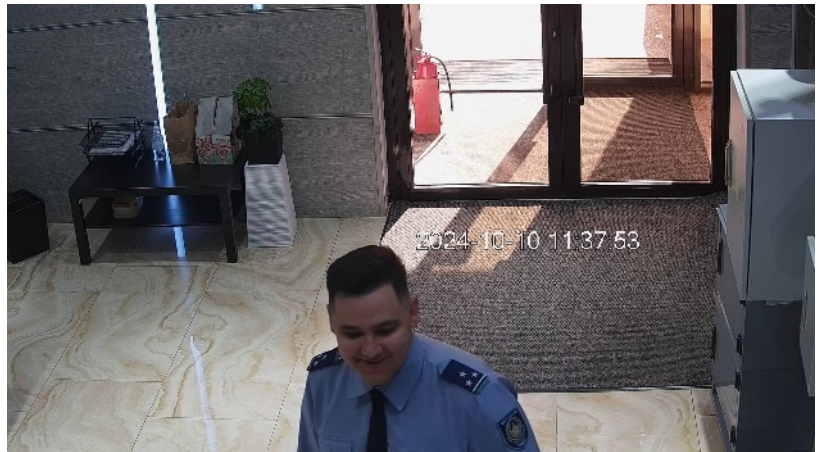
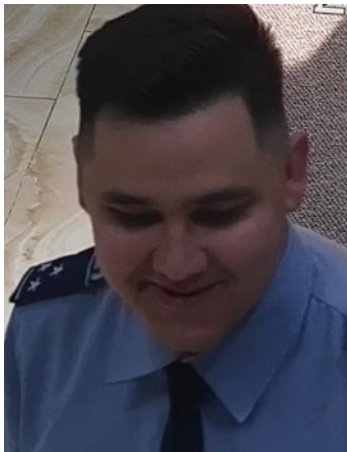
Min: 29px



95% of faces: more than 35px



Max: 81px



Head rotation angles left/right:

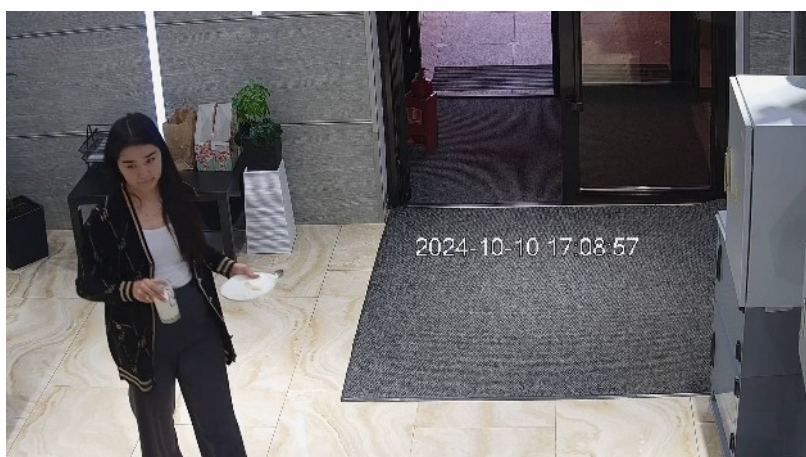
Conclusion: 83% of people have a head rotation angle $< 20^\circ$ from the frontal position - the camera position is optimal for face recognition

Max left: 33°



83% of faces: head turned $< 20^\circ$





Max right: 35°



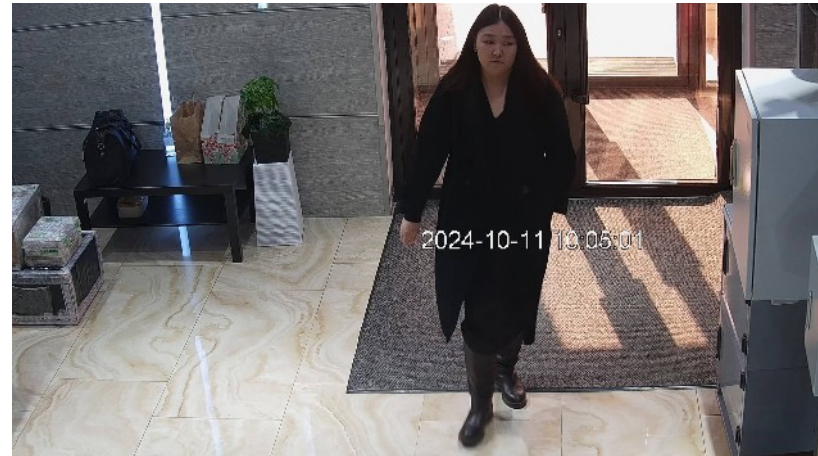
Head tilt angles up/down

Conclusion: 88% of faces have a head tilt angle $> 20^\circ$ 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: 53°



12% of faces: head turned < 20°



Max up: 7°



Sharpness Analysis

Conclusion: 60% 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

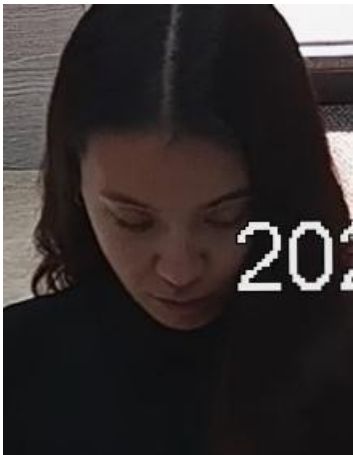
Min: 9%



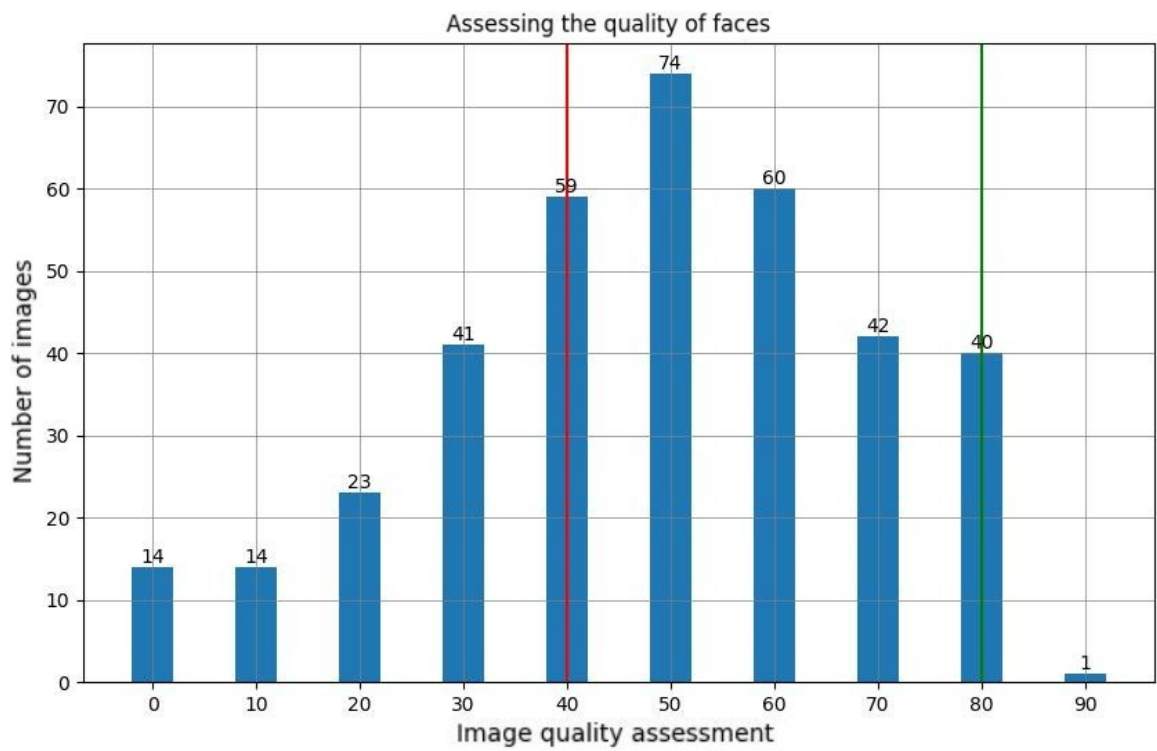
In 40% > 50.0%



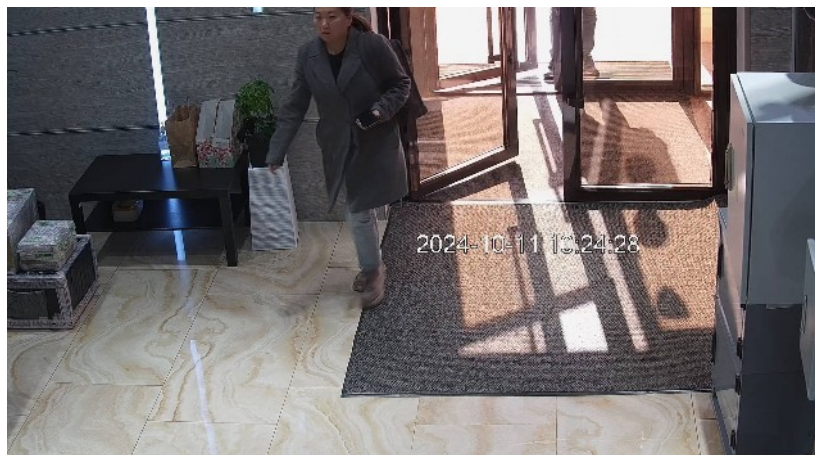
Max: 99%



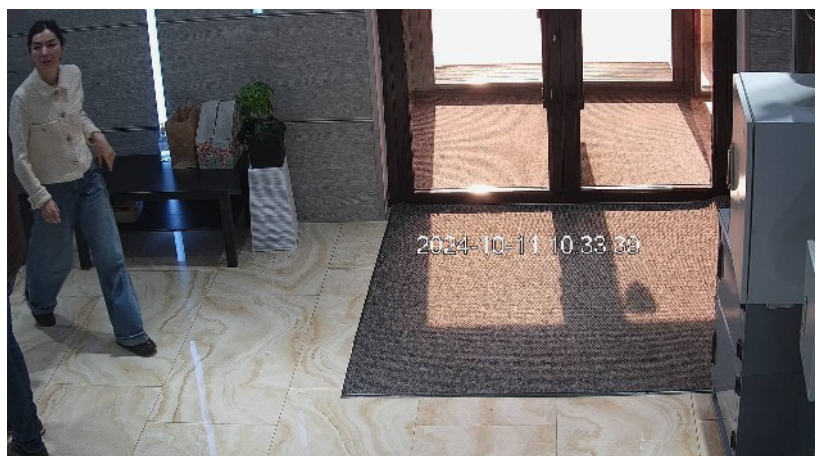
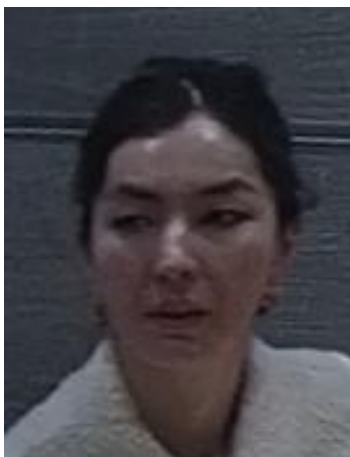
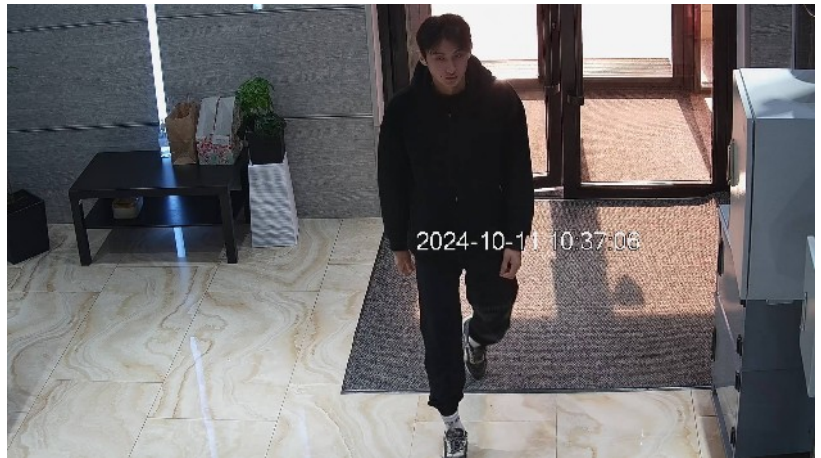
Quality Score Distribution Graph



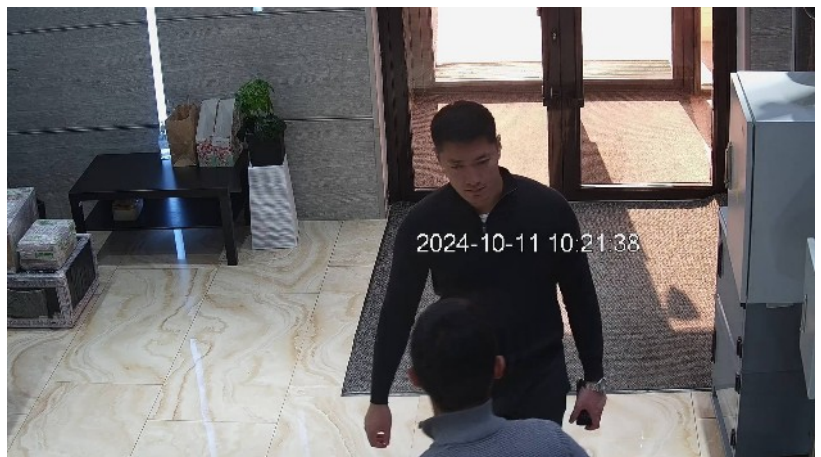
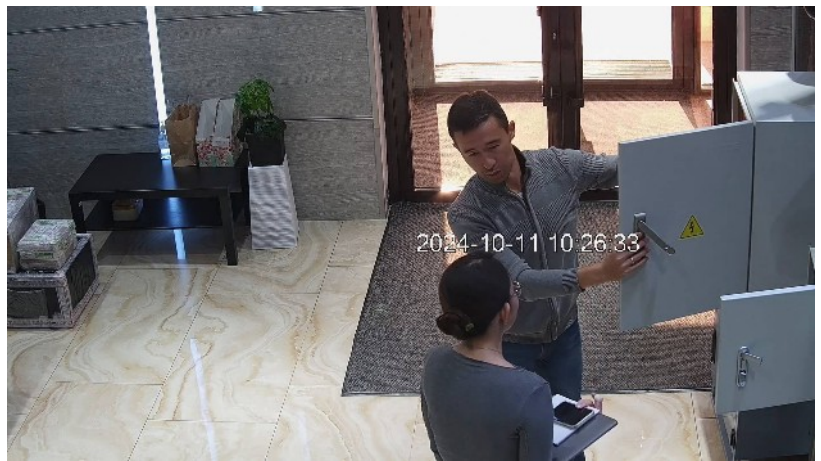
Examples of persons with quality: 0-40



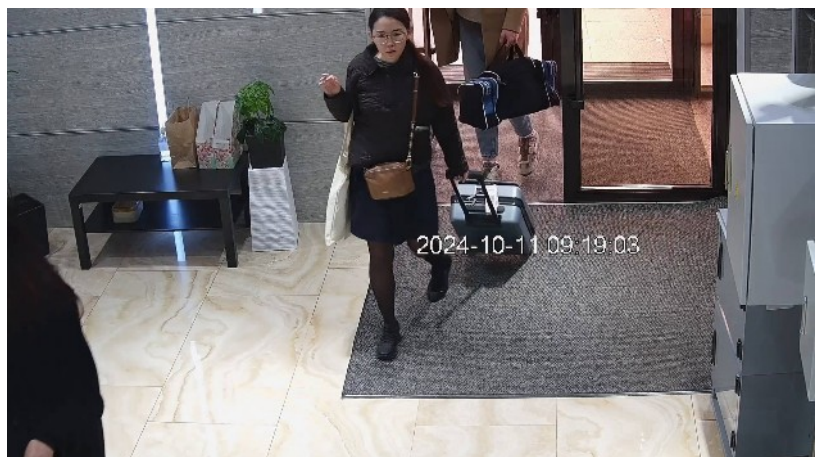
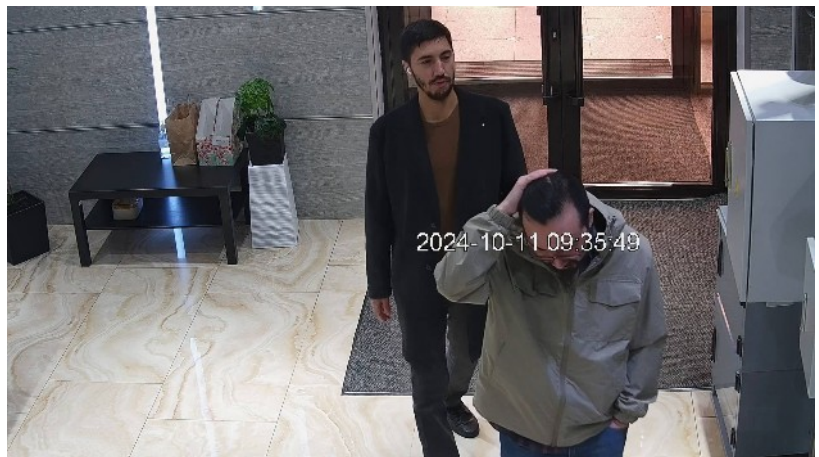
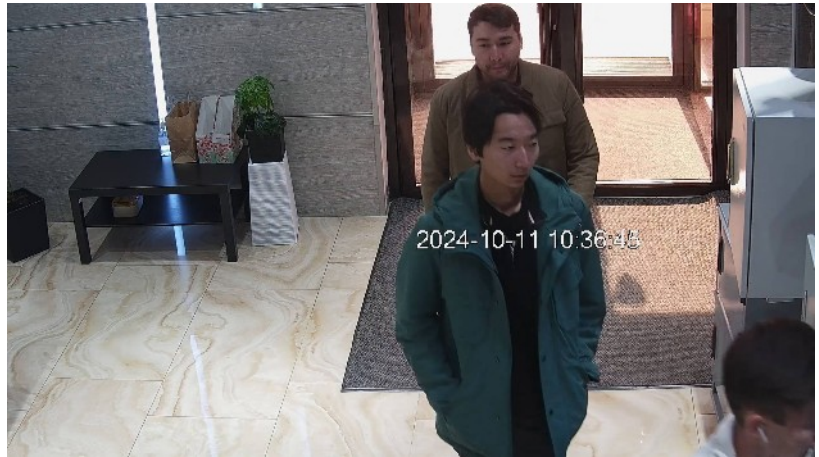
Examples of people with quality: 40-80



Examples of people with quality: 80-100



Examples of persons not involved in quality analysis



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We pump up your expertise to save your resources.