

# **Computer Vision**

...how computers can be made to gain high-level understanding from digital images or videos.



#### Content

- Relevance for Interaction Design
- CV (Input Processing Output)
- Projects 😍



Why is it relevant for spatial interaction? 🖀











Source: Ron McClenny



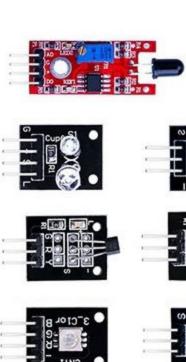
Why is it relevant for spatial interaction?



- Automatic analysis / action
- Contextual information
- Understanding of 3d space in 2d

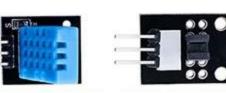


A glimpse behind the curtain.

















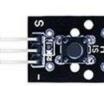








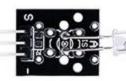












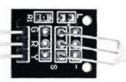










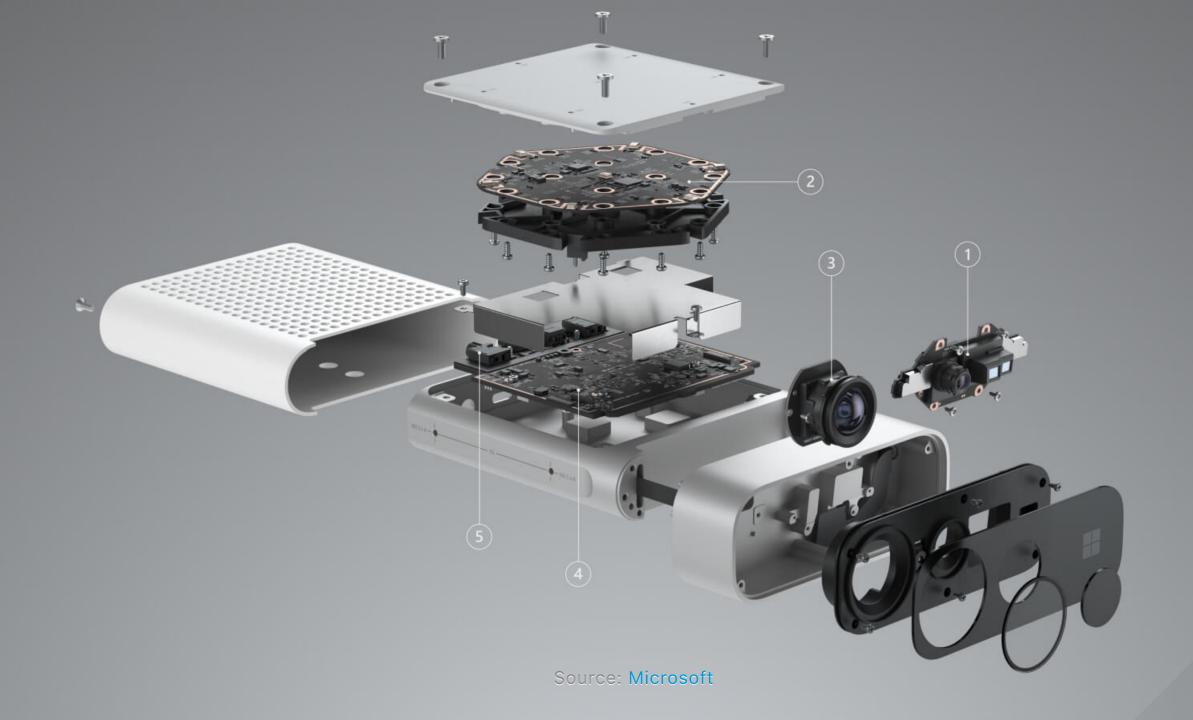


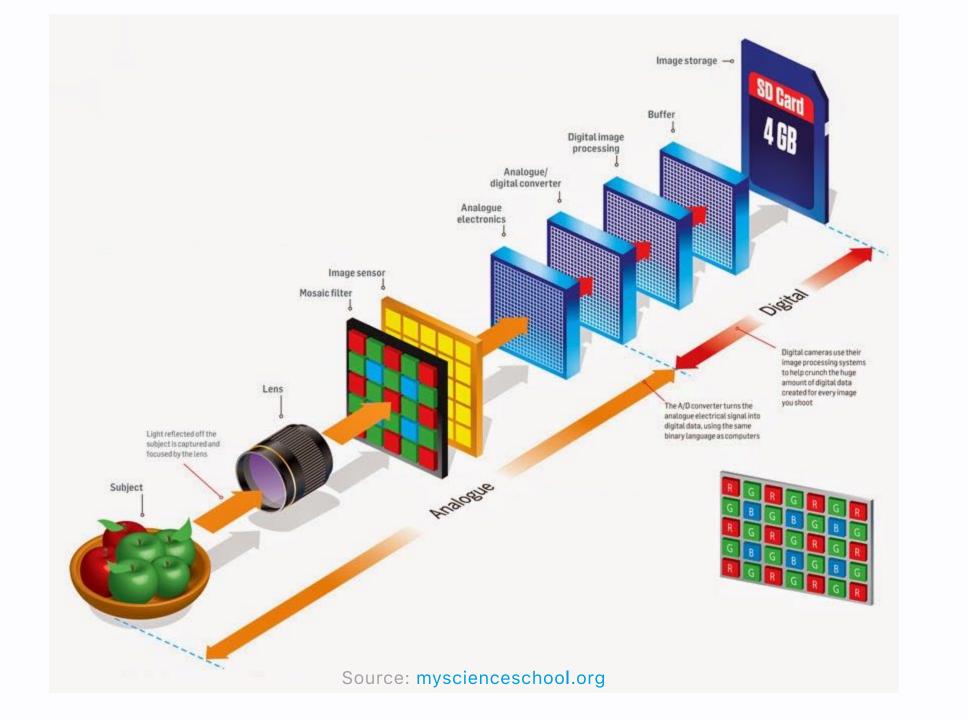




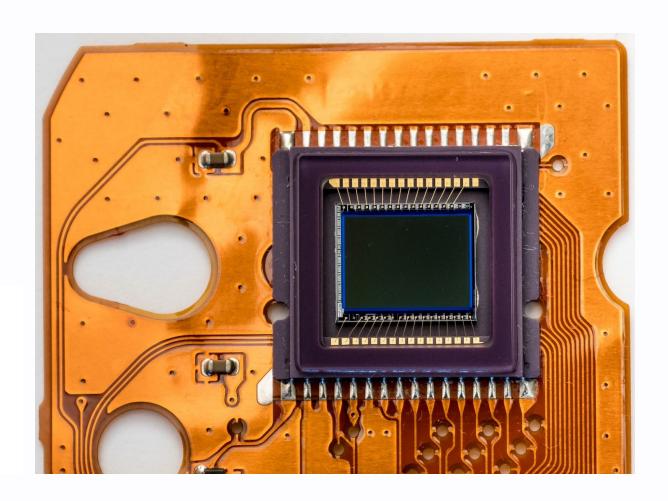


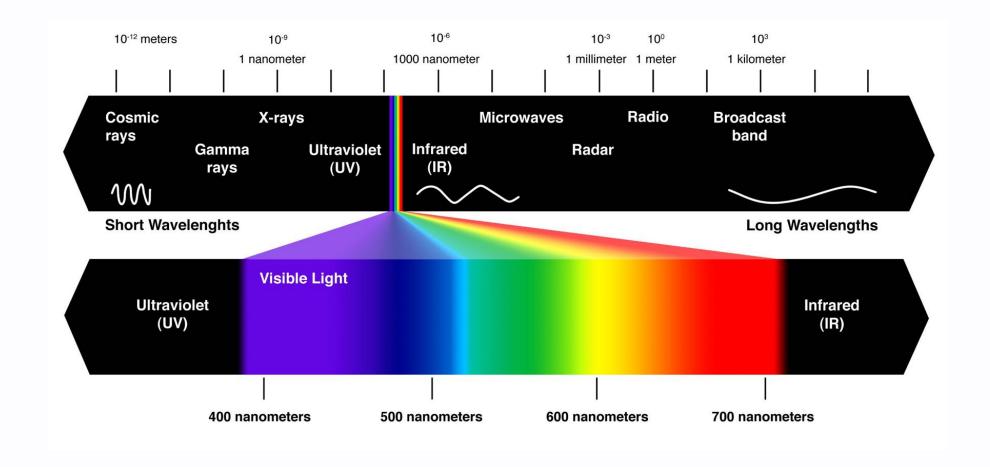






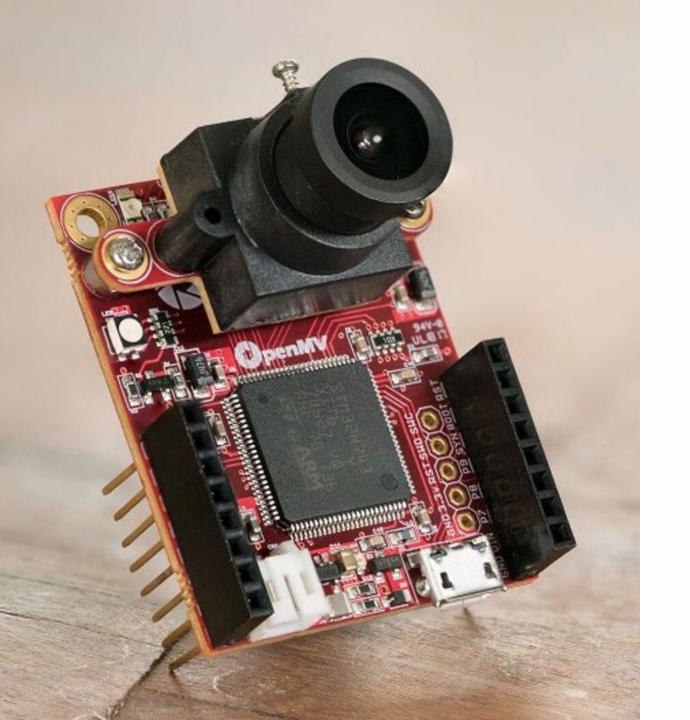












# **OpenMV**

- Edge Computing
- Camera / Image

Source: OpenMV 16



Source: Facebook



#### Where is computer vision used?

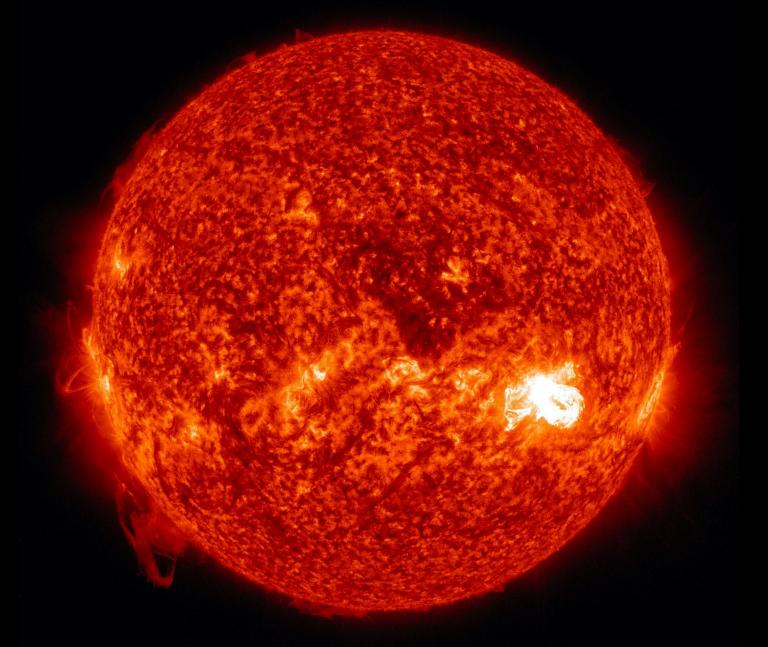


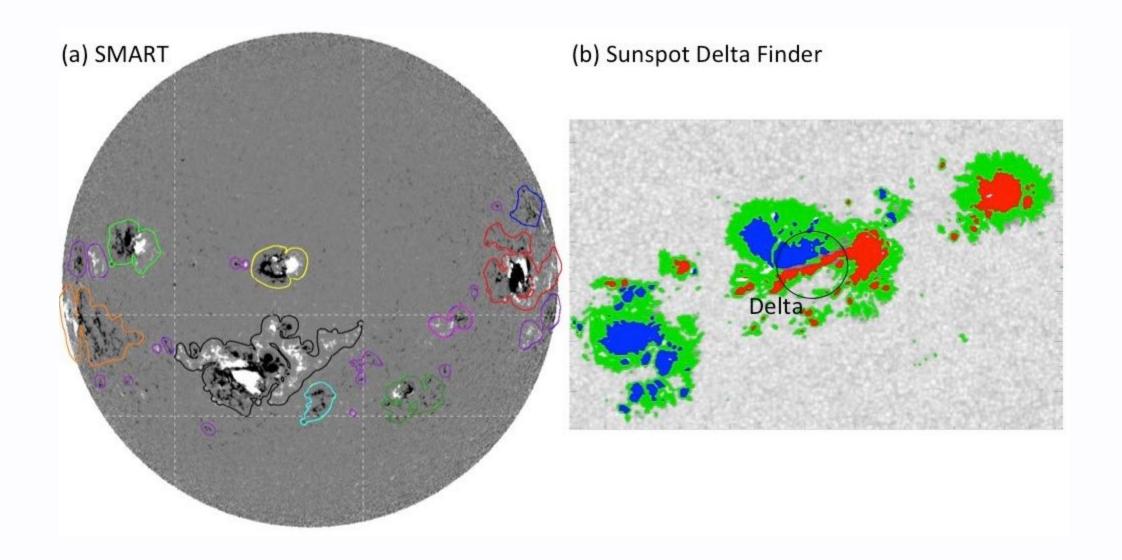


# Where is computer vision used? Everywhere.



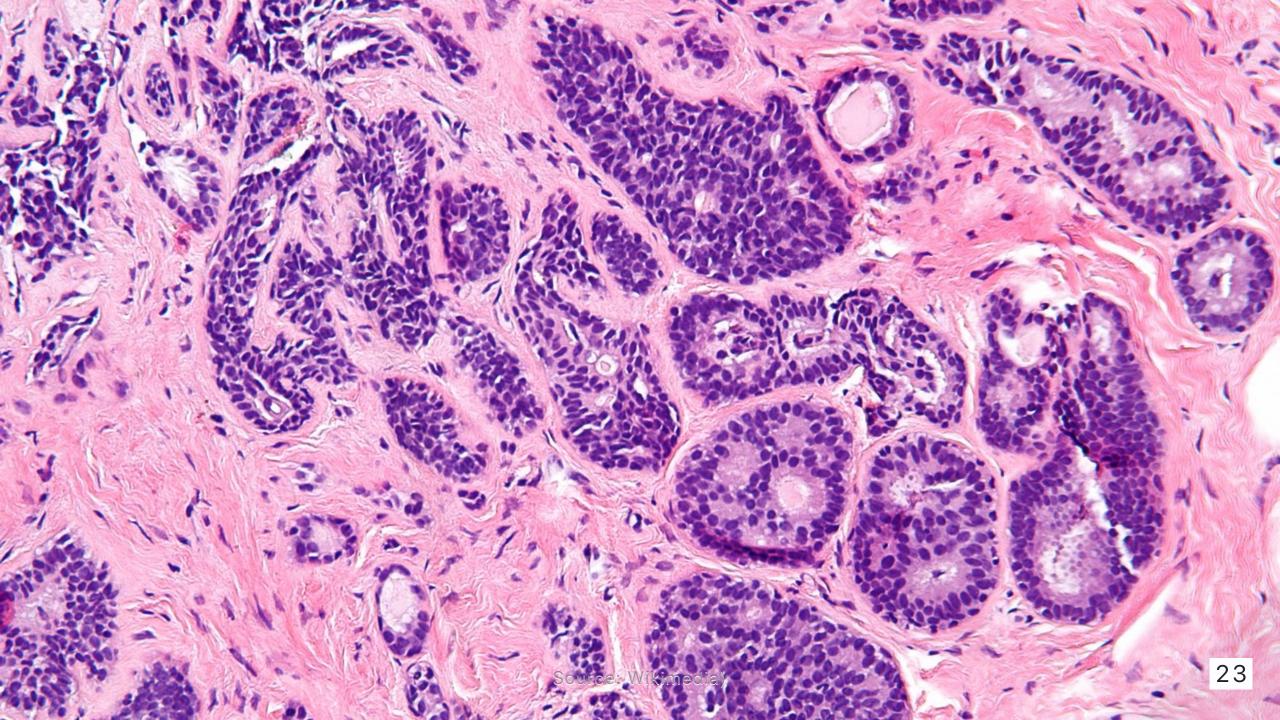
#### Science

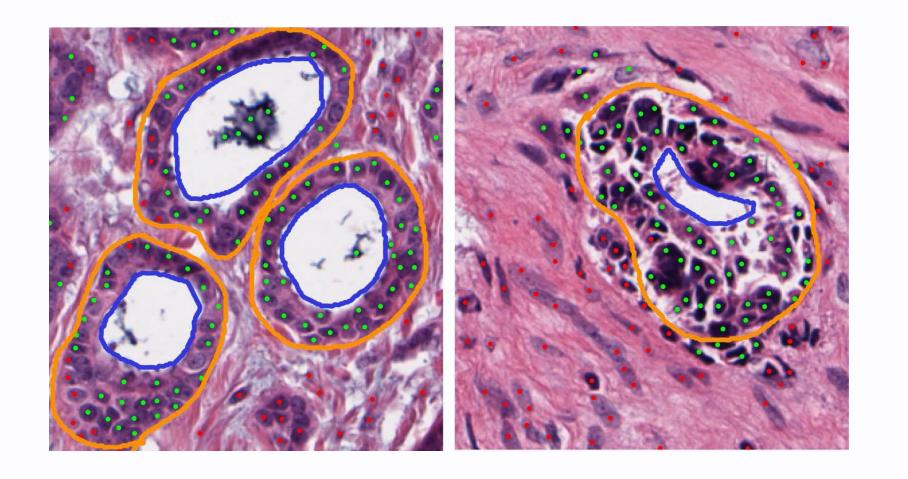




Source: Flarecast.eu

22

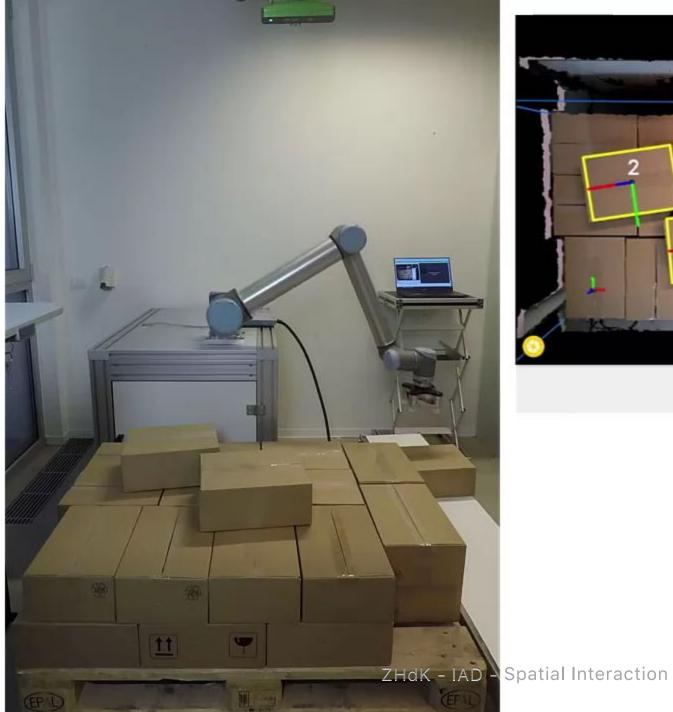


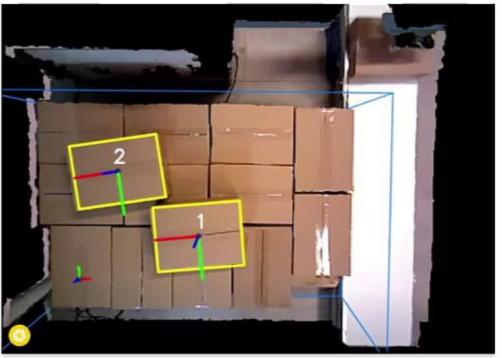




#### **Everyday Life**

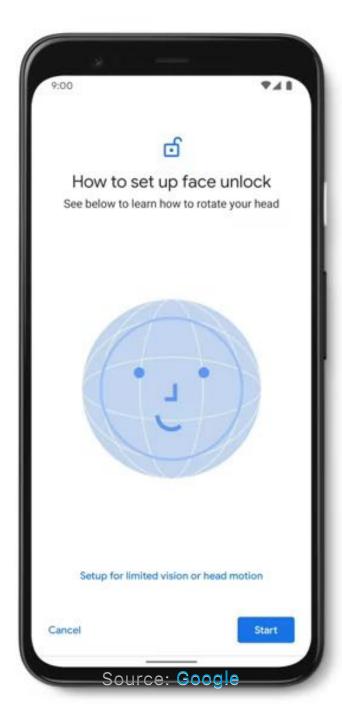






2 objects → 2 + 0 + 0 + 0 rejected clusters in 1.07 sec

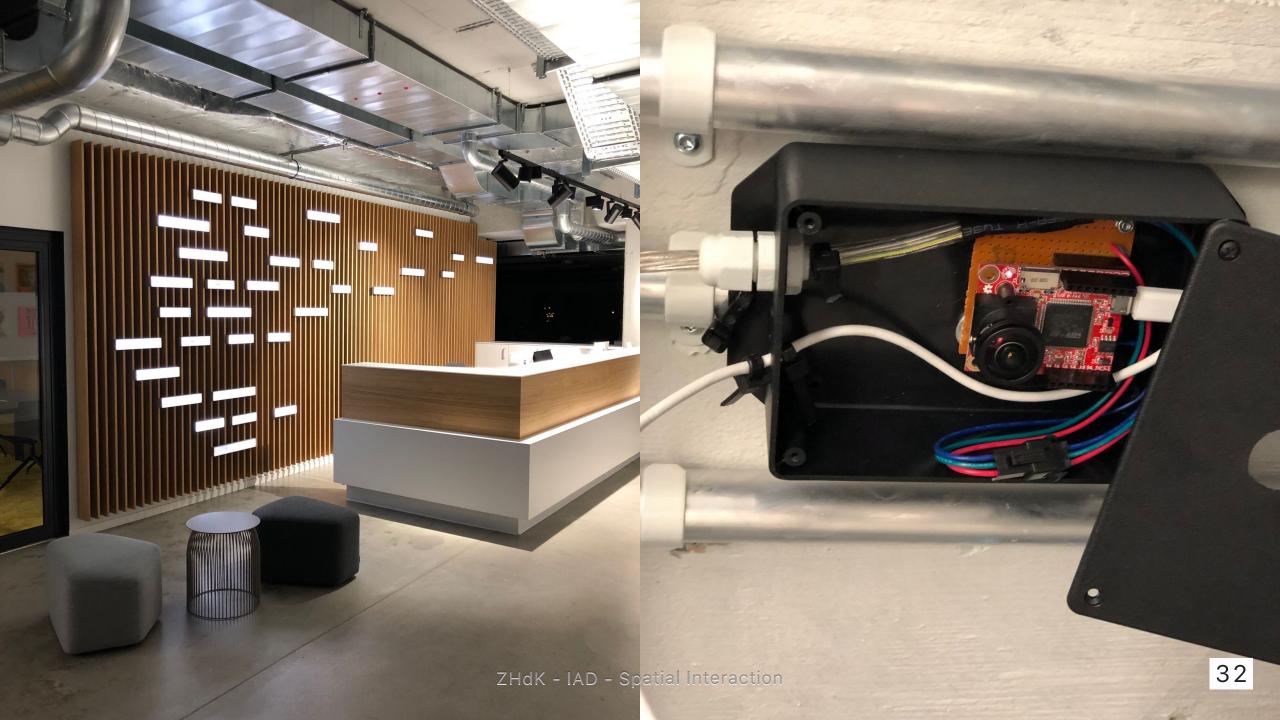
28





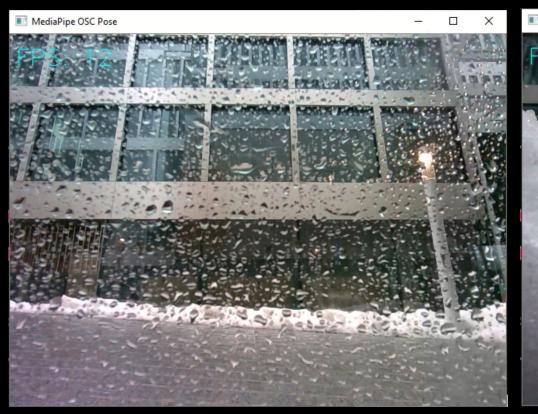
Securing our communities

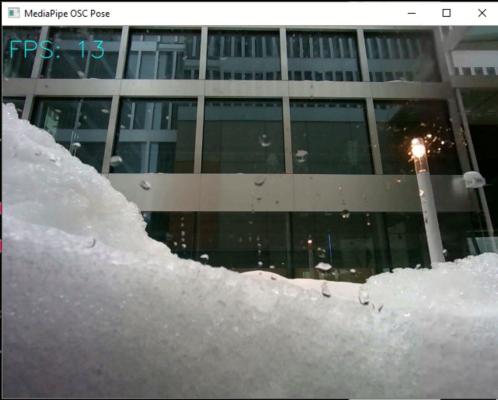
# **Art & Design**

















#### Camera Restricta

Algorithms are already looking through the viewfinder alongside with you: they adjust settings, scan faces and take a photo when you smile. What if your grin wasn't the only thing they cared about?

Philipp Schmitt





# HOW NORMAL AM 1?

Experience how "artificial intelligence" judges your face

Access to your camera is necessary, but no personal data is collected.



#### **Computer Vision**

- Great tool
- Be careful and question

WHO IS WATCHING?