

MobiNetVideo Industrial Day

24th June 2021

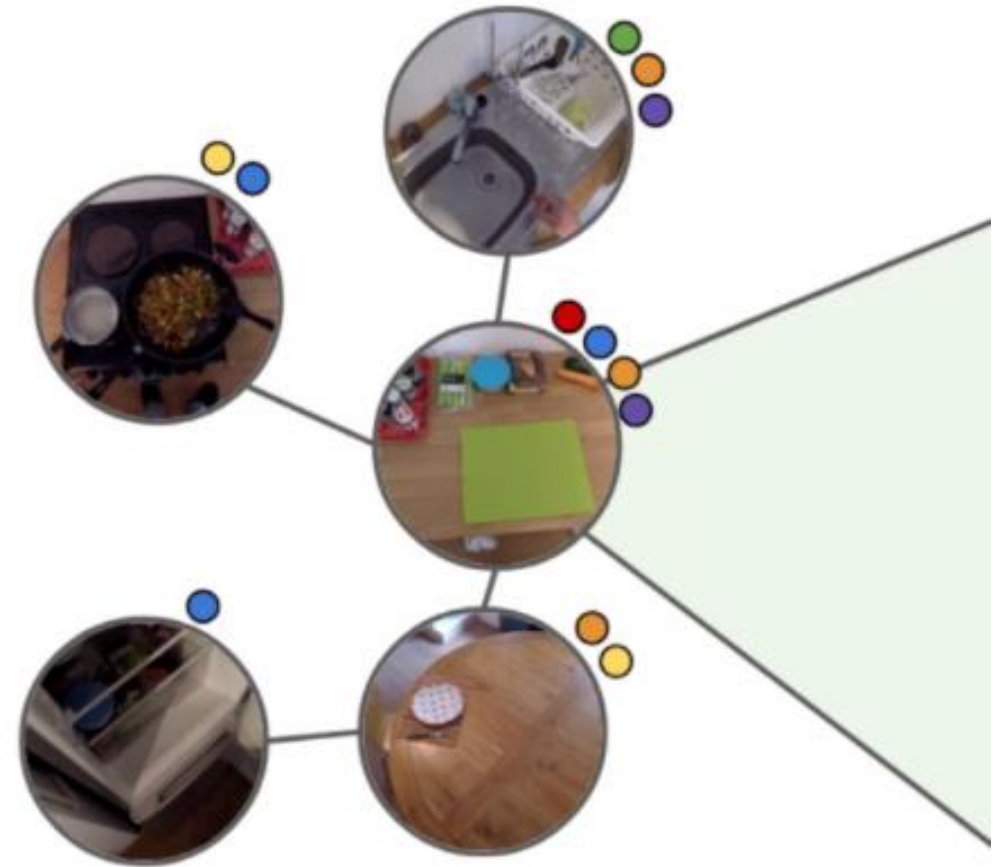
Daniel de Alcalá Valcárcel

Daniel.alcalav@estudiante.uam.es

Deep Learning for Audio and Visual Signal Processing (MUDL4AVS)



Application for the demonstration of the automatic registration of transited spaces for contact tracing of infectious diseases using video signals from lifelogging cameras.



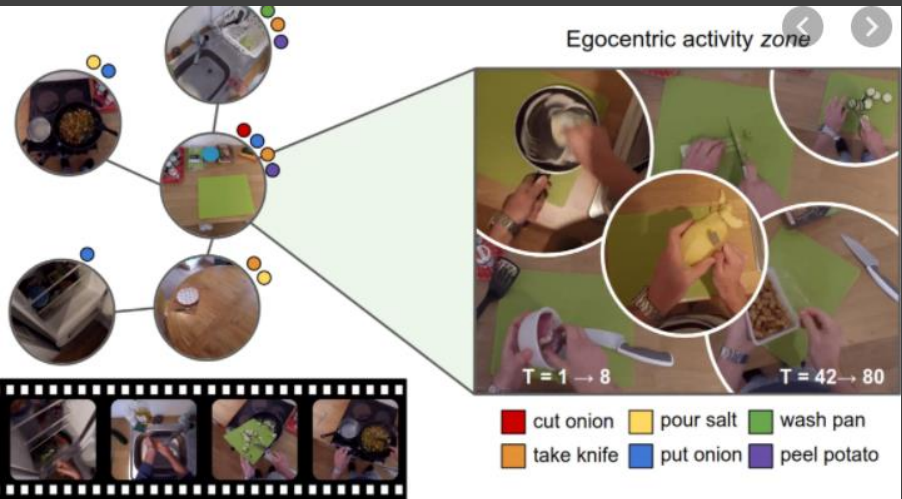
Index

What is the system about?

How is the approach created?
Modifications on the baseline system.

Application for the demonstration of the automatic registration of transited spaces for contact tracing of infectious diseases.

What is the system about?

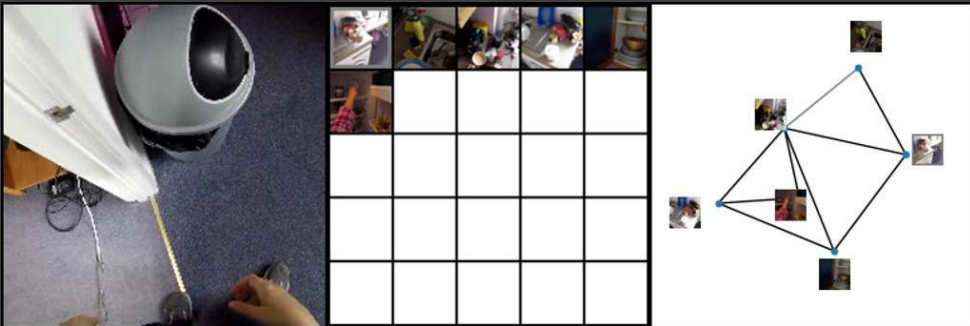


- The final system is about detecting the regions visited by different users with an egocentric camera, and recognize if there is any common region.

- The system builds a graph with the information of the places visited by the two users. This information is analyzed and possible direct and indirect contacts are detected.

- Based on EGO-TOPO approach, the first functional system on automatic region registration.

How is the approach created? Modifications on the baseline system.

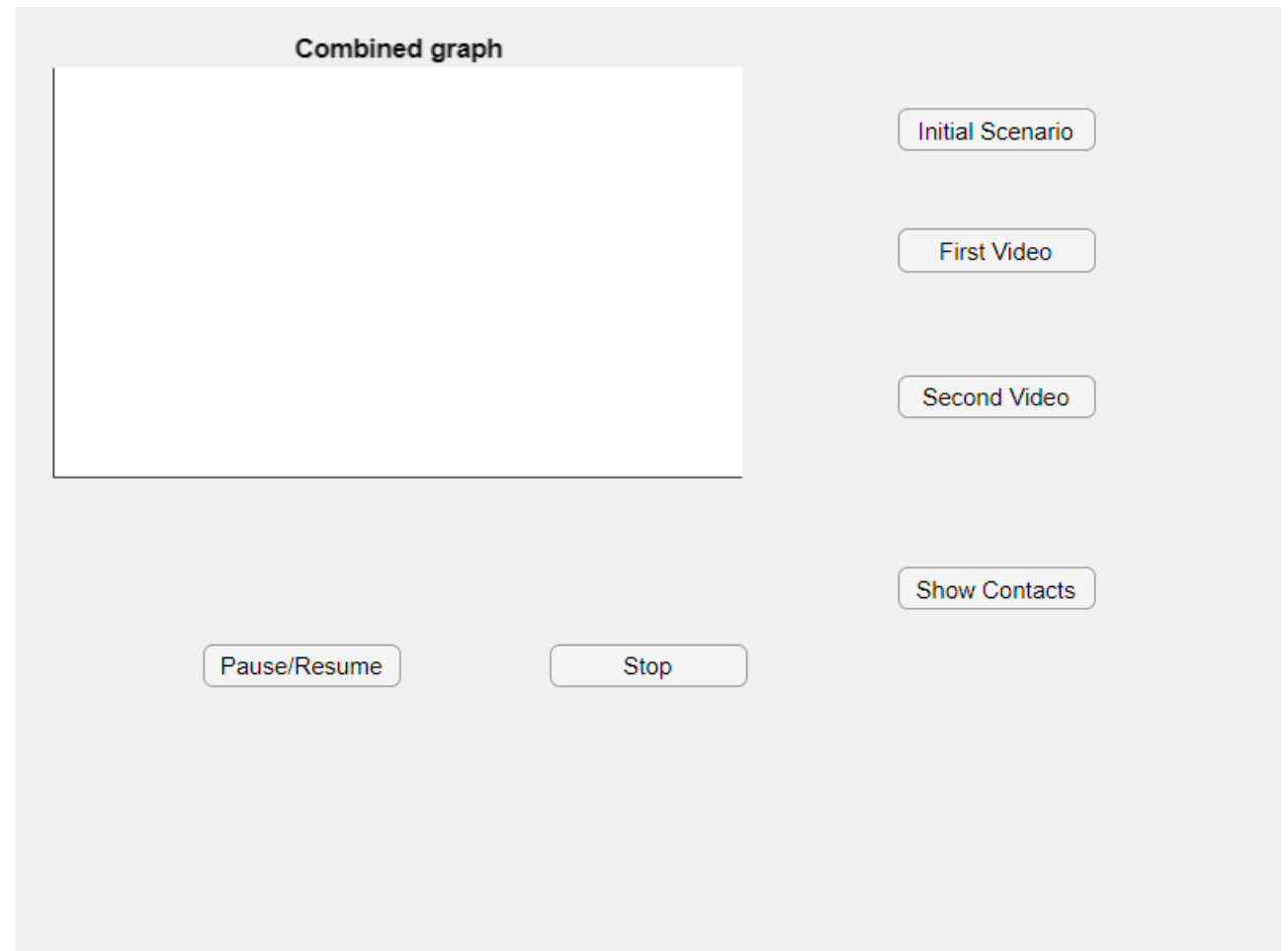


Ego-topo base-line graphs were modified to be created from two user, with the information needed for the app.

The system was analyzed, some inconveniences were seen and they were solved.

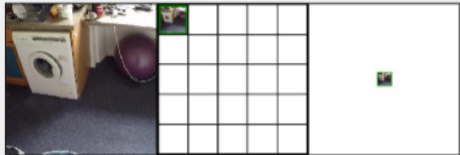
To test that the changes are positive, object annotations were semi-automatic created.

Application for the demonstration of the automatic registration of transited spaces for contact tracing of infectious diseases.



Initial Scenario

Combined graph



Initial Scenario

First Video

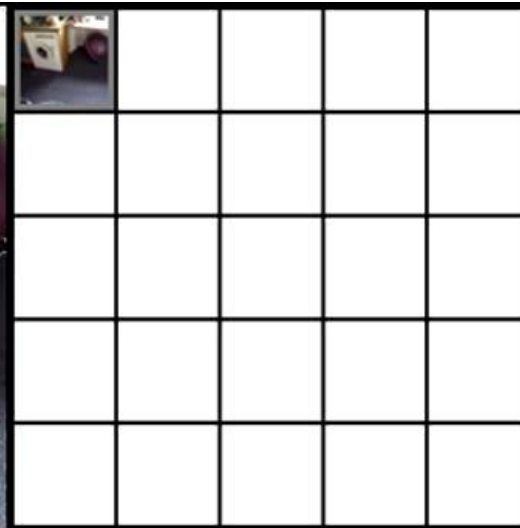
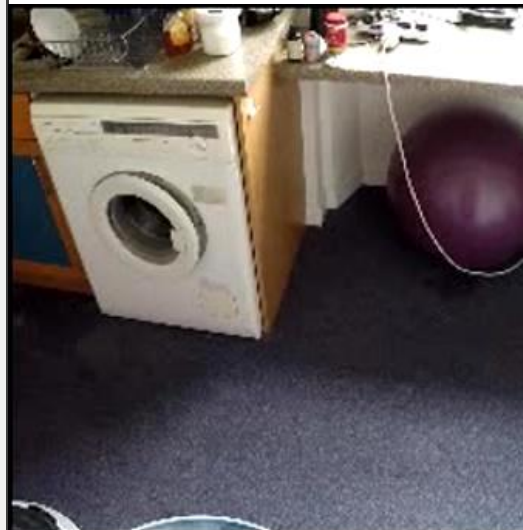
Second Video

Show Contacts

Pause/Resume

Stop

Nodes in common: 1, 21.
Node 1: indirect contact
Node 21: users remained
together for 6.5 seconds



Initial Scenario

Combined graph



Initial Scenario

First Video

Second Video

Show Contacts

Pause/Resume

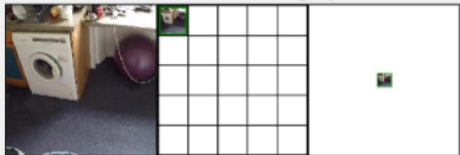
Stop

Nodes in common: 1, 21.
Node 1: indirect contact
Node 21: users remained together for 6.5 seconds



Initial Scenario

Combined graph



Initial Scenario

First Video

Second Video

Show Contacts

Pause/Resume

Stop

Nodes in common: 1, 21.
Node 1: indirect contact
Node 21: users remained together for 6.5 seconds

The main interface is divided into three vertical sections. The left section is a large video frame showing a laundry room with a washing machine and a purple exercise ball. The middle section is a 5x5 grid of empty white squares. The right section is a graph visualization with nodes represented by small video frames and edges connecting them. The graph has a central node connected to four other nodes, which are further connected to each other and to a fifth node at the bottom.

