

Extreme-scale heterogeneous data streams processing

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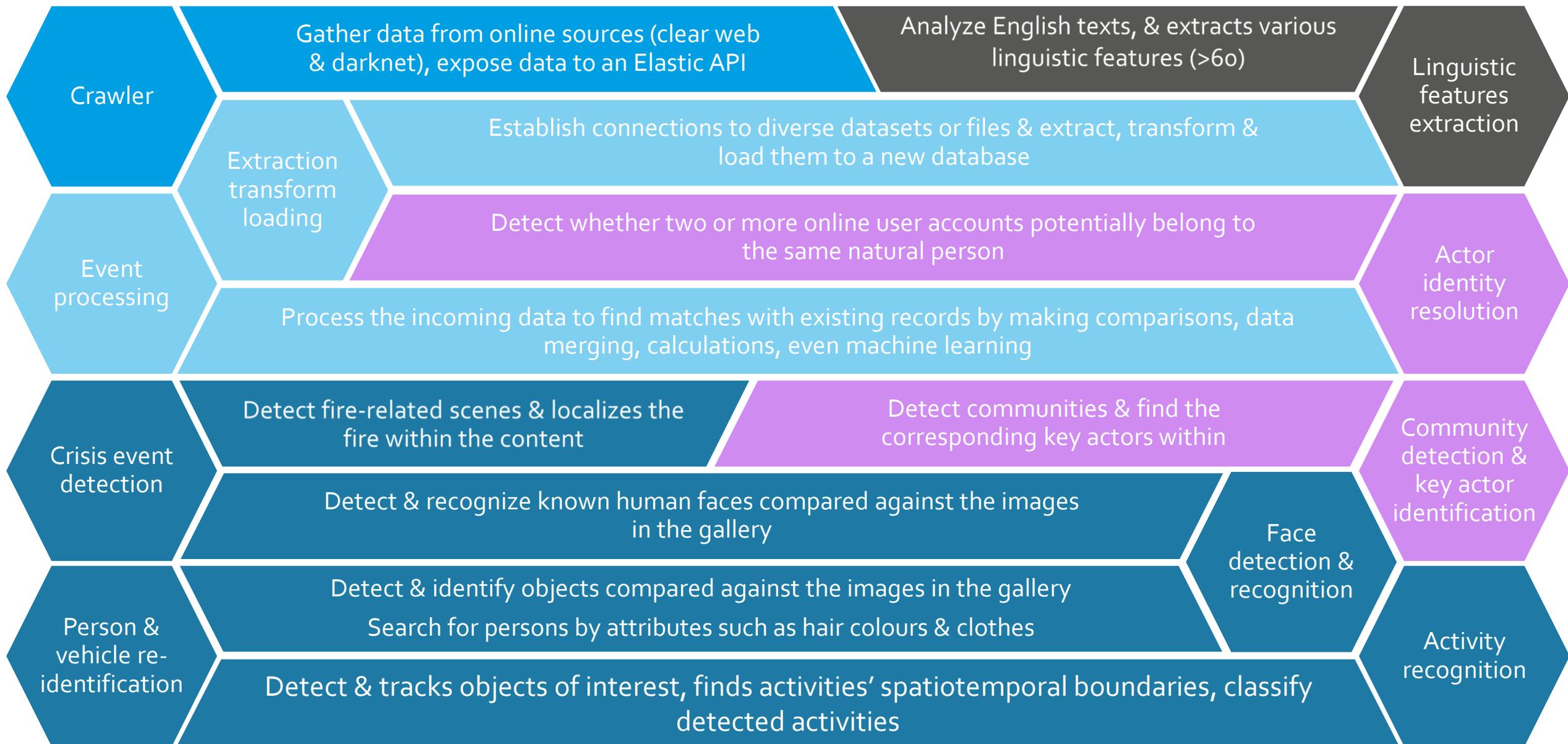
MultiMoDal Data Fusion
and Analytics Group (M4D)

Multimedia Knowledge and
Social Media Analytics
Laboratory (MKLab)

Information Technologies
Institute (ITI)

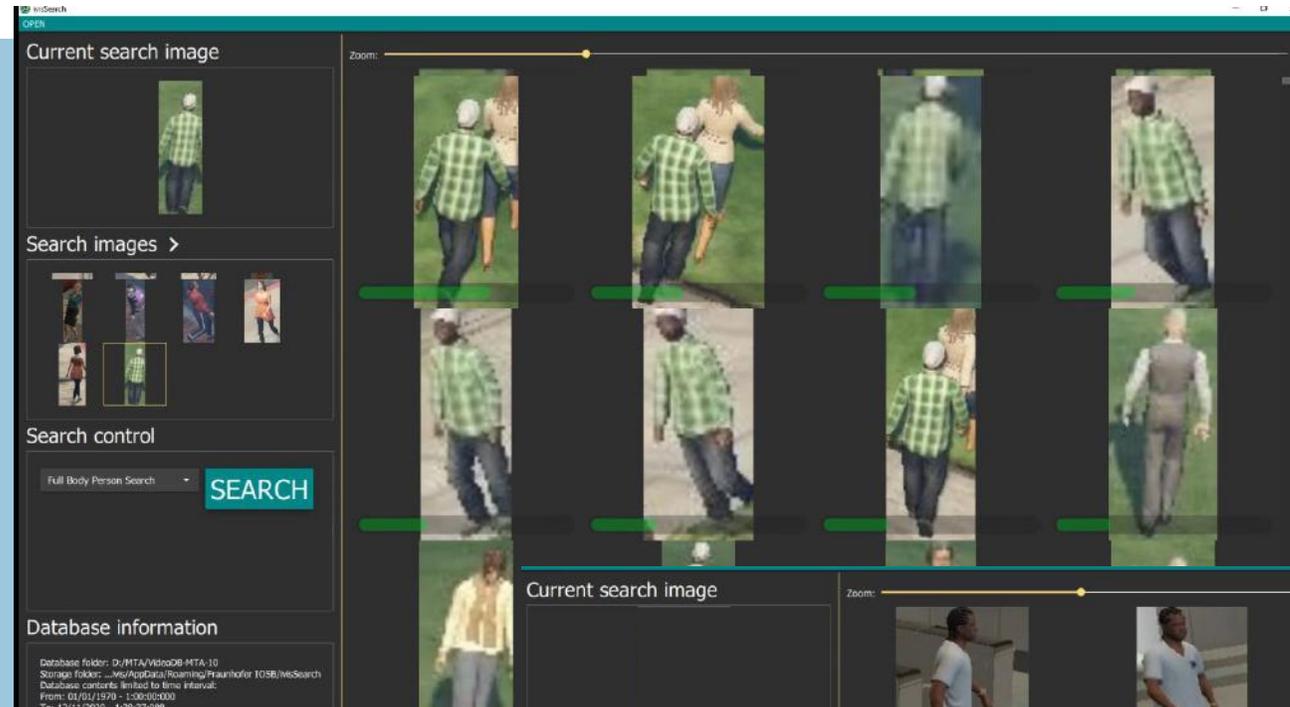
Centre for Research and
Technology Hellas (CERTH)

Extreme-scale heterogeneous data streams processing



Person and vehicle re-identification

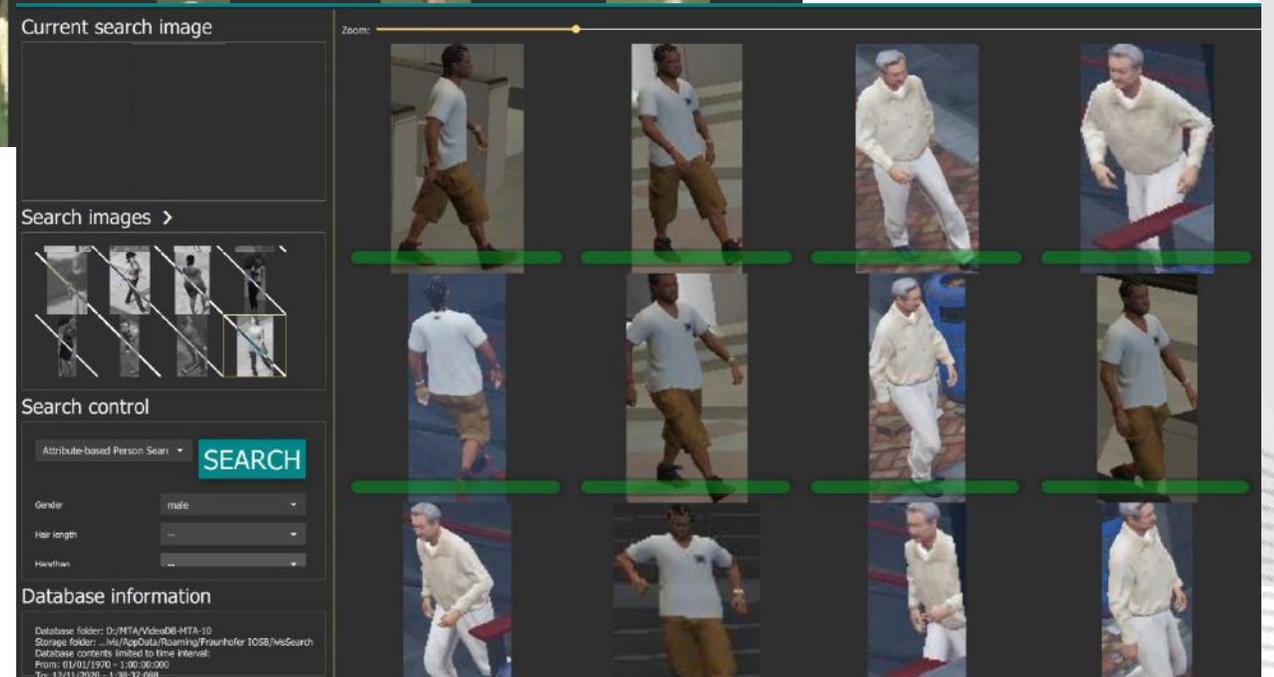
Attribute based search



The screenshot displays the software interface for a person search. On the left, there is a control panel with the following sections:

- Current search image:** Shows a small thumbnail of a person in a green plaid shirt.
- Search images >:** A grid of search results showing various instances of the person in the green plaid shirt.
- Search control:** Includes a dropdown menu set to "Full Body Person Search" and a prominent "SEARCH" button.
- Database information:** Lists technical details such as "Database folder: D:\MTA\Video08-MTA-10", "Storage folder: ...", and "Database contents limited to time interval: From: 01/01/1970 - 1:00:00:000 To: 12/31/2020 - 1:30:37:000".

The main area of the interface features a large grid of search results. A "Zoom" slider is positioned at the top. The results are organized into rows, with green horizontal bars highlighting specific images. The person being searched for is consistently identified across different backgrounds and poses.



This screenshot shows the software interface for an attribute-based search. The control panel on the left includes:

- Current search image:** A thumbnail of a person in a white shirt and brown pants.
- Search images >:** A grid of search results showing various instances of the person in the white shirt and brown pants.
- Search control:** Includes a dropdown menu set to "Attribute-based Person Search", a "SEARCH" button, and filters for "Gender" (set to "male"), "Hair length", and "Handwritten".
- Database information:** Lists technical details such as "Database folder: D:\MTA\Video08-MTA-10", "Storage folder: ...", and "Database contents limited to time interval: From: 01/01/1970 - 1:30:00:000 To: 12/31/2020 - 1:30:37:000".

The main area features a large grid of search results with a "Zoom" slider at the top. Green horizontal bars highlight specific images, demonstrating the system's ability to find similar individuals based on defined attributes.

○ Face detection and recognition demo



Darko Brevic
Male Serbian

2 gallery entries
Appears on **GTA IV**



Dave Norton
Male American

3 gallery entries
Appears on **GTA V**



Franklin Clinton
Male African-American

3 gallery entries
Appears on **GTA V**



Lamar Davis
Male African-American

3 gallery entries
Appears on **GTA V**



Lester Crest
Male American

2 gallery entries
Appears on **GTA V**



Michael De Santa
Male American

2 gallery entries
Appears on: **GTA V**



Molly Schultz
Female American

3 gallery entries
Appears on **GTA V**



Niko Bellic
Male Serbian

3 gallery entries
Appears on **GTA IV**



Roman Bellic
Male Serbian

2 gallery entries
Appears on **GTA IV**



Tao Cheng
Male Chinese

2 gallery entries
Appears on **GTA V**



Tracey De Santa
Female American

3 gallery entries
Appears on **GTA V**



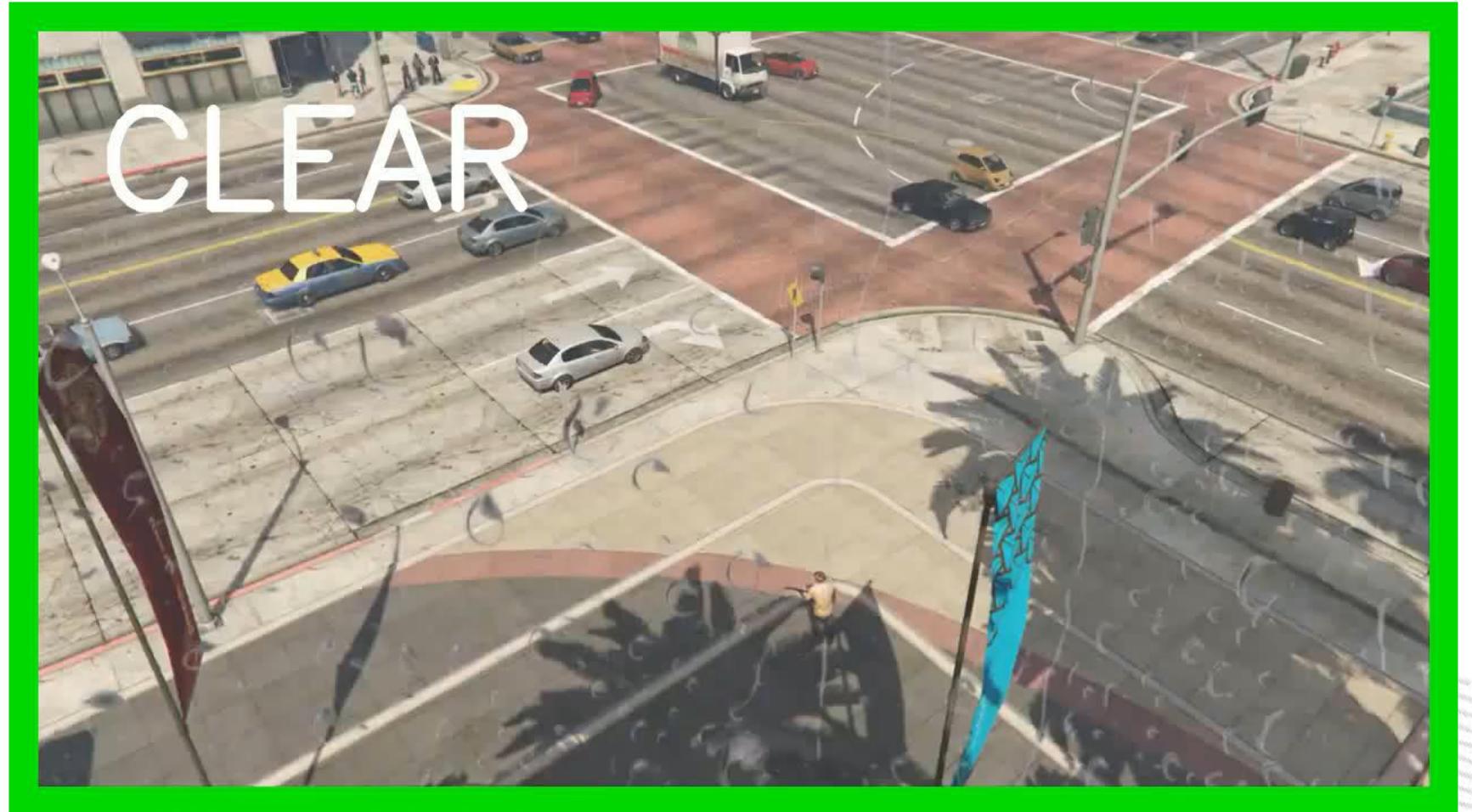
Trevor Phillips
Male Canadian

3 gallery entries
Appears on **GTA V**

Face detection and recognition

- Crisis event detection demo

Crisis event
detection





- Activity recognition demo

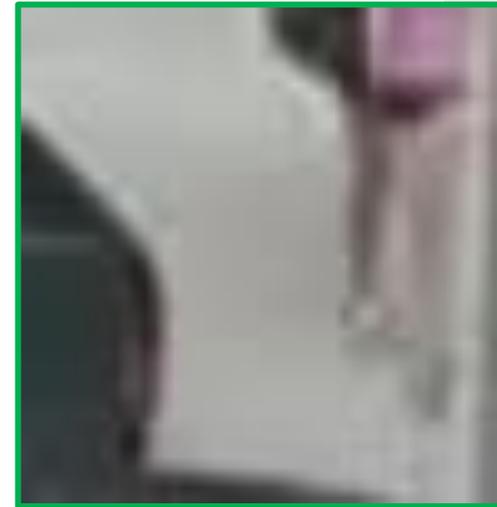
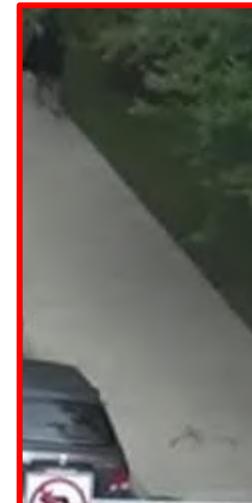
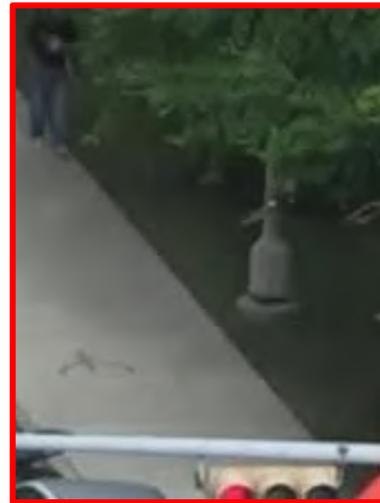
Target activities		
Person pushes object (P).	Person rides bicycle (P).	Person sets down object (P).
Person talks to person (P).	Person carries heavy object (P).	Person carries object (P).
Person crouches (P).	Person gestures (P).	Person runs (P).
Person sits (P).	Person stands (P).	Person walks (P).
Person talks on phone (P).	Person texts on phone (P).	Person uses tool (P).
Person pulls object (P).	Person pickups object (P).	Person person interaction (P).
Person interacts object (P).	Vehicle moves (V).	Vehicle starts (V).
Vehicle stops (V).	Vehicle turns left (V).	Vehicle turns right (V).
Vehicle makes u turn (V).	Person unloads vehicle (PV).	Vehicle picks up person (PV).
Person opens facility or vehicle door (PV).	Person closes facility or vehicle door (PV).	Person opens trunk (PV).
Person loads vehicle (PV).	Person exits facility or vehicle (PV).	Person enters facility or vehicle (PV).
Vehicle drops off person (PV).	Person closes trunk (PV).	

Activity recognition



person_carries_object | 0.52





Actor identity resolution

- [Actor identity resolution demo](#)

- Tweets:

"\\"No there are no professional victims! It's a myth!\\" GamerGate"

"Hey when a gamer gets killed because of stuff like this will you take responsibility? GamerGate"

"oy vey goyim! BUY BUY BUY! GamerGate"

"After a yr of Wu continuously labeling GamerGate as a hate mob it seems she's getting a taste of her own medicine htt"

"WATCH the WipEout story on our PlayStation documentary retrogaming gamedev GamersUnite"

"Reenactment of \\"The Last Samurai\\" Master Chief Edition GamersUnite gamerpositivity GameOn gamedev Halo s\\""

"stupid gaming moment in (my) history me trading in Castlevania IV back in the day prolly got a dollar GamersUnite re"

"She is right the \\"level up\\" panel is primarily made up of online harassers Credit where credits due GamerGate"

"Oh wow confidence has pretty much dried up Wonder why Get em Gamergate ht"

"Why am I not surprised? GamerGate"

"QUALITY JOURNALISM GamerGate"

- Extract linguistic features using LiFE tool

- [LiFE tool demo](#)

- docker run -p 80:5000 life

Thank you!

