

# AI model building for data analysis in LEAs: A practical example

A practical example of using AI enabled OSINT solution for data analysis in law enforcement  
Vilnius, CEPOL, 2022-06-08



# Introduction

- MIL is experienced in developing solutions for highly regulated industries, such as healthcare, security, and defence.
- INspectre developed in collaboration with German law enforcement agencies.
- Brief agenda summary:
  - AI model development introduction
  - Analyst use case demonstration
  - Live demo
  - Takeaways and Q&A

# INspectre overview

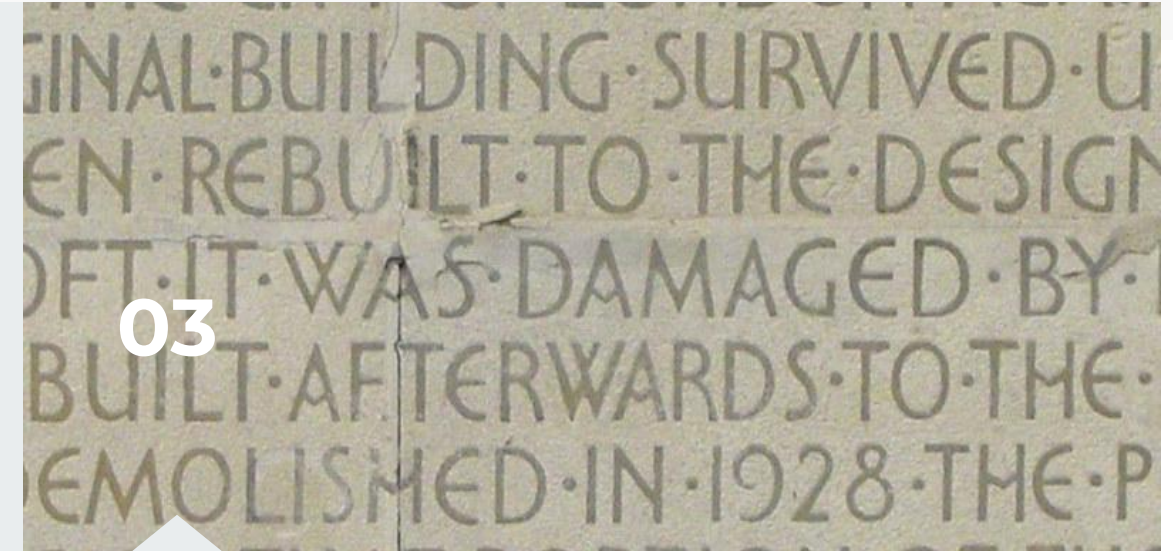


## Object Detection

- Faster RCNN models
- Trained for different purposes
- Detection of Weapons, Swastikas, ...

## Face Recognition

- Detection and Recognition
- Customized Facenet
- List of recognized faces

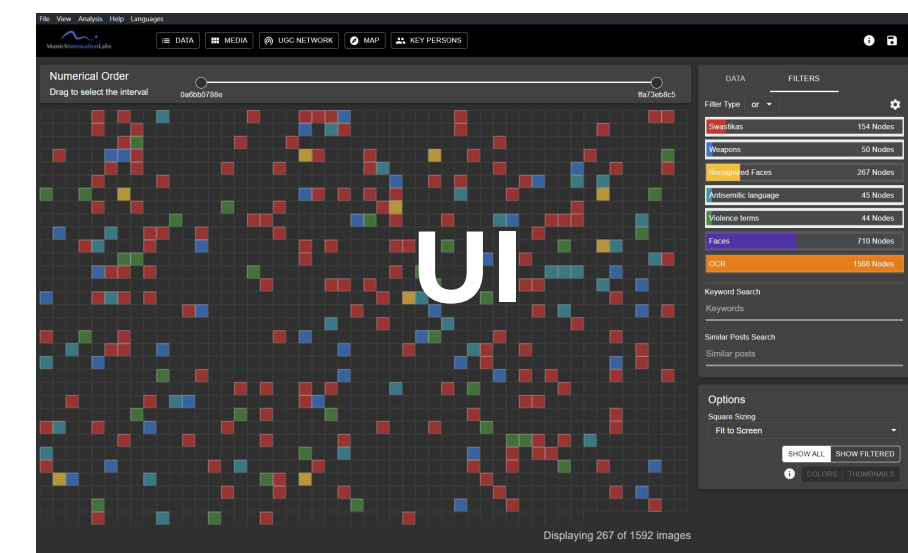


## Text analysis

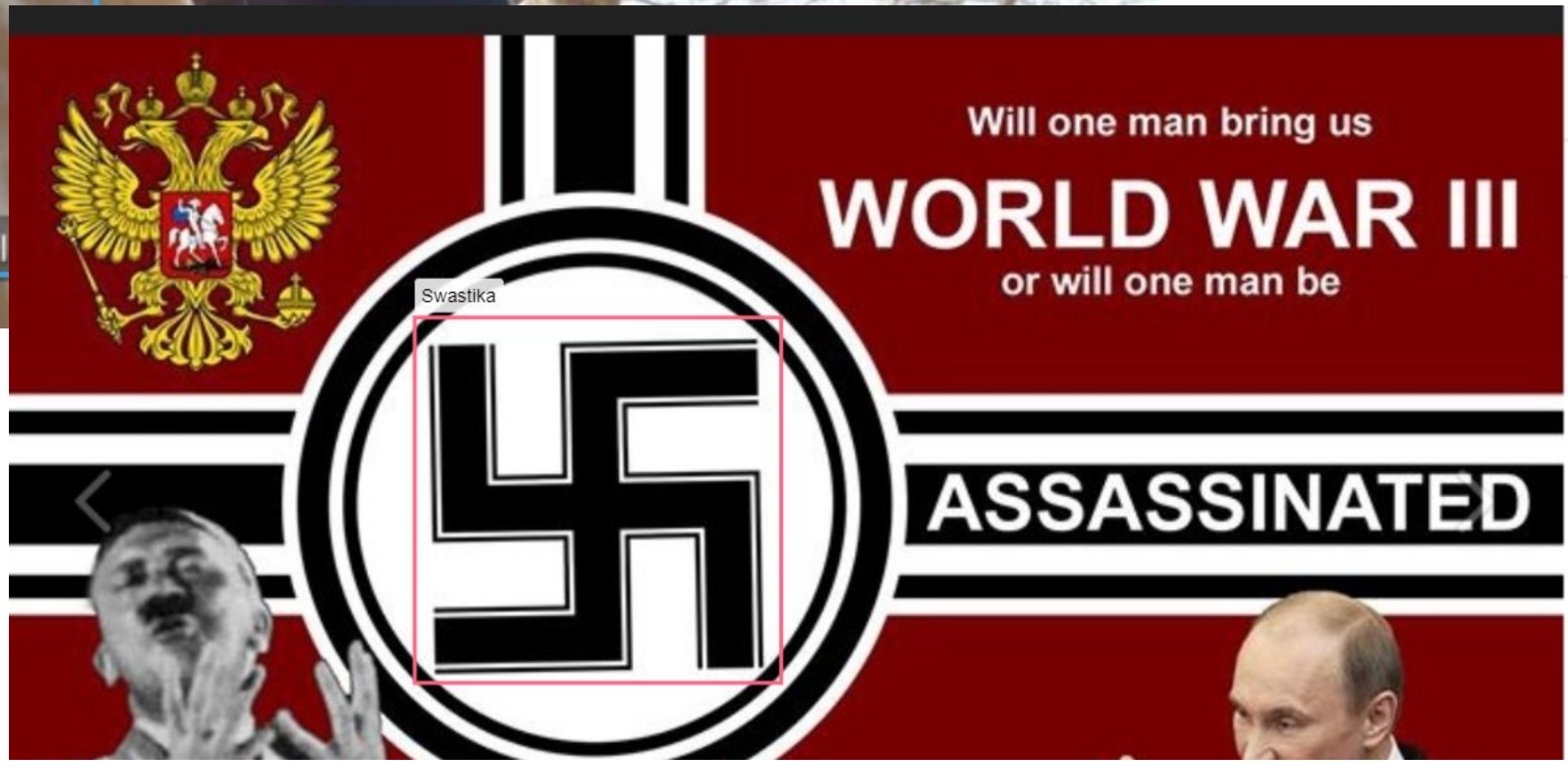
- OCR analysis (Tesseract OCR)
- Voice to text recognition (VOSK)
- Topic analysis



Faster RCNN: <https://proceedings.neurips.cc/paper/2015/file/14bfa6bb14875e45bba028a21ed38046-Paper.pdf>  
FaceNet: [https://www.cv-foundation.org/openaccess/content\\_cvpr\\_2015/papers/Schroff\\_FaceNet\\_A\\_Unified\\_2015\\_CVPR\\_paper.pdf](https://www.cv-foundation.org/openaccess/content_cvpr_2015/papers/Schroff_FaceNet_A_Unified_2015_CVPR_paper.pdf)  
Tesseract OCR: <https://tesseract-ocr.github.io/>  
VOSK: <https://github.com/alphacep/vosk-api>



assault\_rifle



Swastika

Mike Engholm  
21 Aug 2020



Unbekanntes Gesicht



assault\_rifle

- WehS- DOWNHOOK 20 Jul @ 12:43pm  
Valve can suck my balls.
- DOTAHUN2 20 Jul @ 11:26am  
Change picture bro you might get banned
- \*\*[]Emperor Pyromancer777\*[] 20 Jul @ 12:09am  
Hello again man good to see again, united we are strong!
- WehS- DOWNHOOK 3 May @ 10:42am  
Good to hear ;)
- DOTAHUN2 3 May @ 10:20am  
you got hun on your side
- THE MAGIC 3 May @ 9:59am  
Heil
- Swastika  
LerdismisAsatanicRot 7 Mar @ 1:41pm  
POST WINDMILL IN 5 OTHER PROFILES TO KEEP STEAM PROPERLY AIR CONDITIONED.
- DOTAHUN2 16 Dec. 2020 @ 10:59am



**DEUTSCHLAND** STAATLICHE HILFE

**600-Milliarden-Paket soll Großunternehmen vor dem Untergang bewahren**

**Wer diesen heuchlerischen Marionetten jetzt immer noch Glauben schenkt,**

Die Aufnahmefähigkeit der großen Masse ist sehr beschränkt, das Verständnis klein, dafür jedoch die Vergeßlichkeit groß. Darum gilt es Propaganda auf nur sehr wenige Punkte zu beschränken und diese schlagwortartig so lange zu verwenden, bis sich auch der Letzte unter einem solchen Wort das Gewollte vorzustellen vermag.

Bemerkung: da hat sich seit damals nicht viel verändert, sie fallen immer noch darauf herein. Heute nennt man die Sprachregelung und Meinungsführerschaft



## IDENTIFIZIERUNG RECHTSRADIKALER ELTERN UND IHRER NAZI-BRUT.

Die Zunahme von Hass und Hetze durch rechtsradikale Nazischweine in Deutschland verreckel! liegt in der mangelnden Bespitzelung und Denunziation in Schulen und Kitas. Unsere Stiftung hilft Ihnen/Ihnen typisches Drecksnaziverhalten zu erkennen und uns sofort zu melden:

- ✘ Eltern nicht arbeitslos (PRIVILIGIERT)
- ✘ Kein Migrationshintergrund (FREMDENFEINDLICH)
- ✘ Ein oder beide Elternteile sind weiß (RASSISTISCH)
- ✘ Spricht zuhause Deutsch (VÖLKISCH)
- ✘ Gepflegtes Erscheinungsbild (NATIONALISTISCH)
- ✘ Gute körperliche Verfassung (HITLERJUGEND)
- ✘ Fällt durch Disziplin und Benehmen auf (IDENTITÄR)
- ✘ Pausenbrot mit Obst & Gemüse (FAT SHAMING)
- ✘ Guter Notendurchschnitt (HERRENRASSISCH)
- ✘ Kennt Vogel- und Baumarten (WIDERLICHE HEIMATLIEBE)
- ✘ Hilft gerne anderen Kindern (SUBVERSIVITÄT)
- ✘ Zeigt Lehrern Respekt und Interesse (NS-GEHORSAM)

Helfen Sie uns, diese abartigen Eigenschaften aus unserer bunten und vielfältigen Gesellschaft auszuradiieren und diesen menschenverachtenden Nazi-Eltern das Sorgerecht zu entziehen. Es gibt kein Recht auf Nazi-Kinder.



# AI model development process

- Iterative and systematic improvement of the model



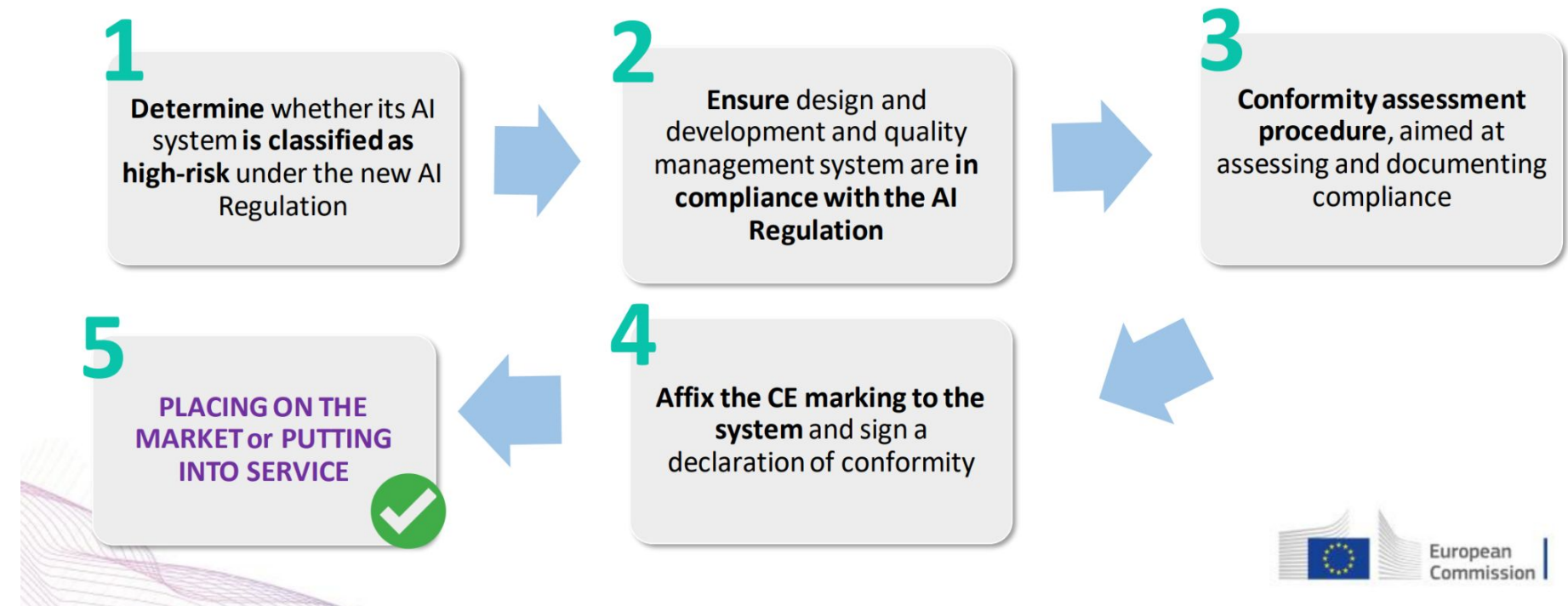


# EU Artificial Intelligence Act proposal

- In April 2021, the European Commission published a draft framework regulation that proposes regulation of all high-risk AI systems according to a CE marking process
- The proposal is currently in the commenting phase, high-risk AI systems will include applications in law enforcement and public safety
- **High-risk AI systems as per proposal include**
  - **AI systems to used by law enforcement** in a variety of applications, e.g. intended to be used for crime analytics regarding natural persons
  - Biometric identification and categorisation of natural persons

## CE marking and process (Title III, chapter 4, art. 49.)

**CE marking** is an indication that a product complies with the requirements of a relevant Union legislation regulating the product in question. In order to affix a CE marking to a high-risk AI system, a provider shall undertake **the following steps**:



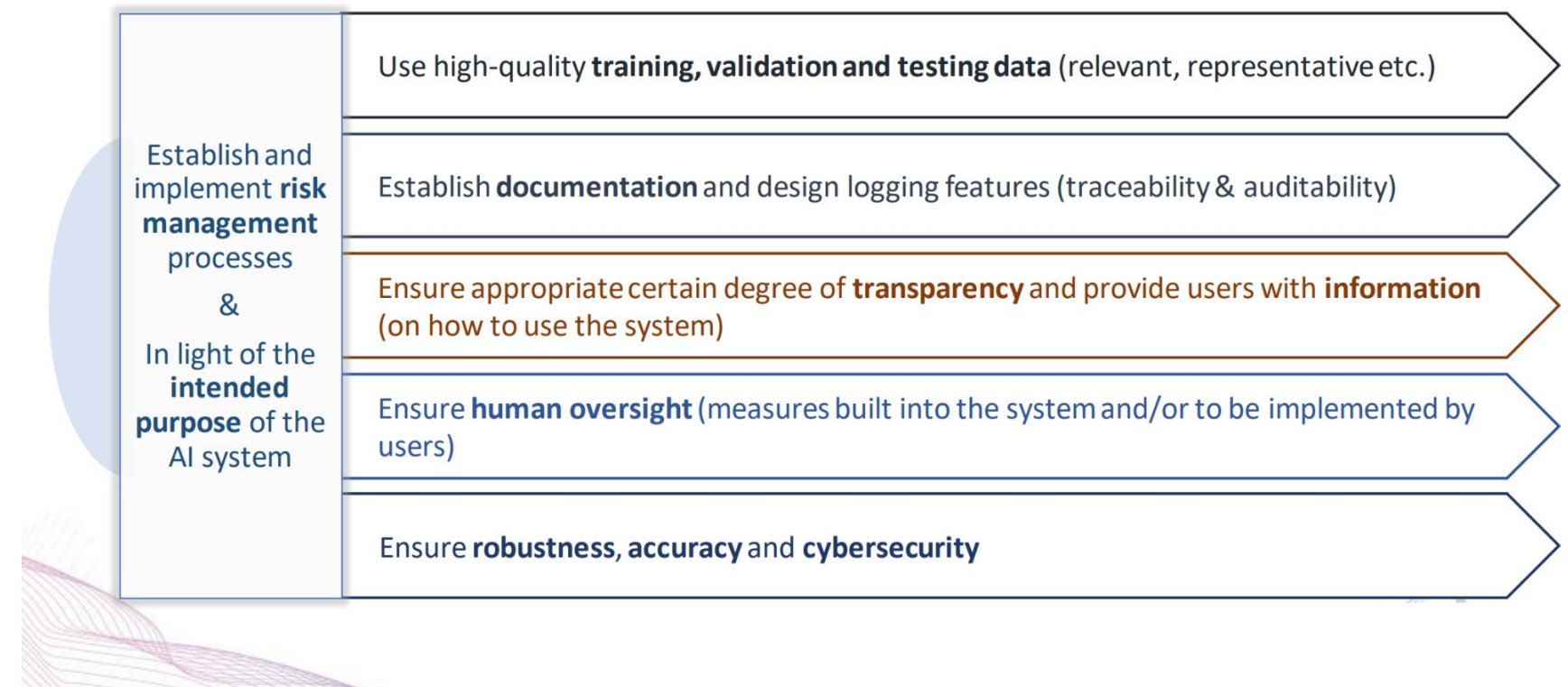
AIA proposal: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206>

Source of figures, CEPS summary presentation: <https://www.ceps.eu/wp-content/uploads/2021/04/AI-Presentation-CEPS-Webinar-L.-Sioli-23.4.21.pdf>

# EU Artificial Intelligence Act proposal

- With this suggested legislation, regulatory approval of high-risk AI systems will be on the level of Medical Device Regulation and require a similar level of documentation by the manufacturer
- Documentation of training, validation and testing data
- Design documentation
- Usability testing and technical manuals
- Validation in realistic environments with endusers
- **A close collaboration between law enforcement agencies and solution providers is needed to be able to fulfil these regulatory requirements!**

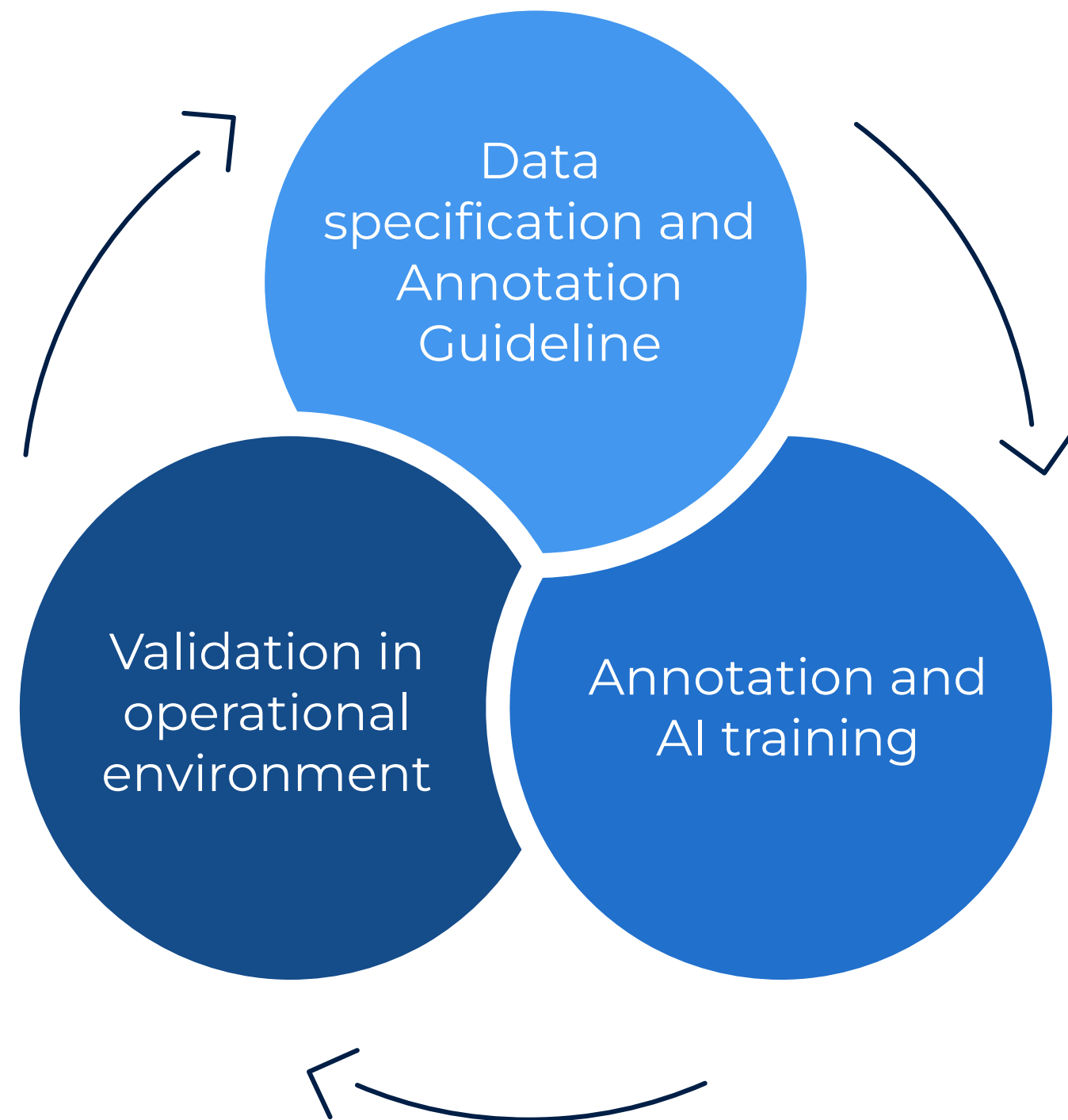
## Requirements for high-risk AI (Title III, chapter 2)



AIA proposal: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206>

Source of figures, CEPS summary presentation: <https://www.ceps.eu/wp-content/uploads/2021/04/AI-Presentation-CEPS-Webinar-L.-Sioli-23.4.21.pdf>

# Necessary workflow for LEA AI modules in production



## Data specification and Annotation Guideline

- Identify and define operating environment (e.g. Social Media inputs) in a Data Specification
- Creation of an Annotation Guideline for specific task (e.g. “hate speech”, “firearm in hand”)

## Annotation process and AI training

- Carry out annotation according to Annotation Guideline, quality assured through documented QA process, e.g. second/third rater review
- Split into Training/Test/Validation datasets
- Technical training of AI module

## Validation

- Validation set is evaluated with domain experts (endusers), taking into account usability
- If needed: Adaptation of Annotation Guideline, new iteration
- Due to time dynamics of underlying data: Supervised learning in production environment with on-going validation (AI models do age!)

# Application Demonstration

- Example scenarios of application usage by an Analyst
- Scenario 1: Finding potentially offensive/extremist behavior in digital environments
- Scenario 2: Finding uncredible/unreliable claims, their spread and identifying the individuals responsible for them
- **Live Demo**




# Application Demonstration

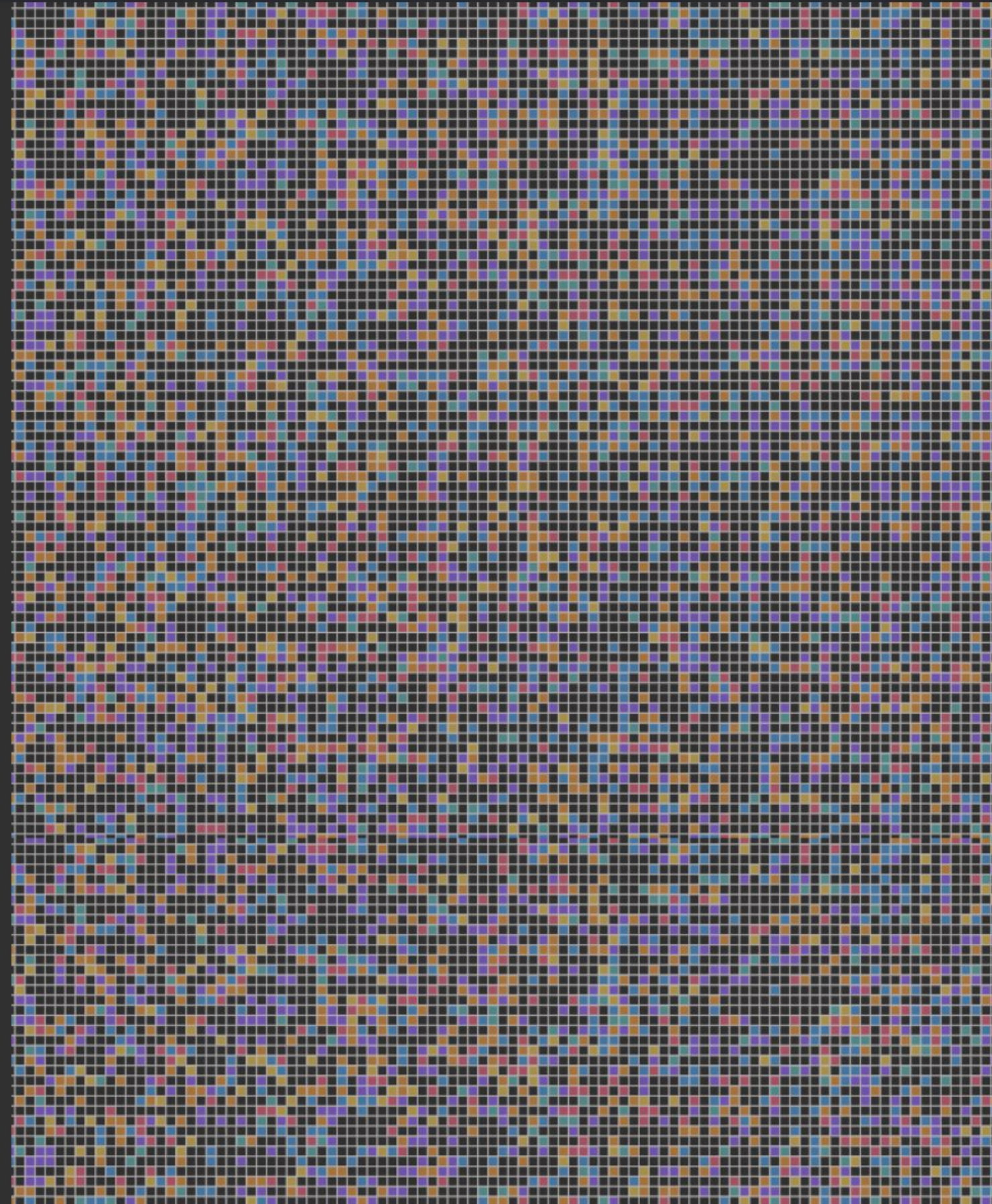
File View Analysis Help Languages



# Welcome!

Select a sample project

-  MALI PROJECT
-  UKRAINE TELEGRAM
-  MOTRA



# Scenario 1

Finding potentially offensive/extremist behavior in digital environments

# 1. Get data overview

**Project Overview**

Project Name: MOTRA

Project Description: Measuring radicalization processes as well as extremist behavior in digital environments.

Created at: May 16, 2022

Content Timerange: 2020-01-01 - 2020-10-01

Users / Interactors: 596

Entries: 13718

**User Generated Content Count**

**User Generated Content Interactors Count**

Legend: Telegram\_Message (purple), Telegram\_Comment (orange), Telegram\_User (yellow)

**Feeds**

Name	Platform	Entries	Users	Attachments
<a href="https://t.me/PatriotenHamburg">https://t.me/PatriotenHamburg</a>	Telegram	58	25	3
<a href="https://t.me/PatriotenBremen">https://t.me/PatriotenBremen</a>	Telegram	4420	360	309
<a href="https://t.me/PatrioteninWien">https://t.me/PatrioteninWien</a>	Telegram	116	55	15
<a href="https://t.me/Deutsche_Patrioten">https://t.me/Deutsche_Patrioten</a>	Telegram	9324	171	1379

**Media Categories**

Filter Type: or

- Swastikas: 10 Nodes
- Weapons: 20 Nodes
- Recognized Faces: 28 Nodes
- Antisemitic language: 20 Nodes
- Violence terms: 13 Nodes
- Faces: 305 Nodes
- OCR: 650 Nodes

**Network Graph**

Nodes: Gabler, oliverjanich, Sowa, q\_proofs, Milde, Ostfriesenmann, staatenlos\_info, fb\_Radio, Preuße, vieleZeitzeugen, staatenlosinfokanal, HeimatgewaltfreiVereint

# 2. Identify relevant AI analyses/filters

The screenshot displays the MunichInnovationLabs software interface. At the top, there is a menu bar with 'File', 'View', 'Analysis', 'Help', and 'Languages'. Below the menu, the 'MunichInnovationLabs' logo is on the left, and navigation buttons for 'DATA', 'MEDIA', 'UGC NETWORK', 'MAP', and 'KEY PERSONS' are in the center. On the right, there are icons for a list, information, and a save function.

The left sidebar contains several sections:

- Collections:** A list with 'MOTRA RQ1' and a '+ Create a new collection' button.
- Media Categories:** A section with a 'Filter Type' dropdown set to 'or'. It lists several categories with their respective node counts:
  - Swastikas: 10 Nodes
  - Weapons: 20 Nodes
  - Recognized Faces: 1 Nodes
  - Antisemitic language: 20 Nodes
  - Violence terms: 13 Nodes
  - Faces: 27 Nodes
  - OCR: 57 Nodes
- Topics:** A dropdown menu.
- Timebar:** A dropdown menu.

The main area on the right is a data table with columns: 'UGC Type', 'Username', 'Created Time', and 'Contents'. The table is titled 'COLUMNS FILTERS DENSITY EXPORT'. It contains 15 rows of data, each starting with a checkbox. The 'Contents' column contains truncated text, including URLs and phrases like 'Foto von Viola' and 'Der Gesundheitsexperte der SPD und ANTIFA Fanboy Lauterbach beim Fake New...'. At the bottom right, there is a pagination control showing 'Rows per page: 20' and '1-20 of 57'.

UGC Type	Username	Created Time	Contents
<input type="checkbox"/>	Telegram_Message	Mbeke	28.4.2020, 12:26:21
<input type="checkbox"/>	Telegram_Message	Mbeke	15.5.2020, 05:59:57
<input type="checkbox"/>	Telegram_Message	Pressecop24.com	11.7.2020, 06:07:24 <a href="https://pressecop24.com/wuetend-ueber-geplante-fahrverbote-biker-kuendigen-ne...">https://pressecop24.com/wuetend-ueber-geplante-fahrverbote-biker-kuendigen-ne...</a>
<input type="checkbox"/>	Telegram_Message	Pressecop24.com	11.7.2020, 06:21:53 <a href="https://pressecop24.com/frankfurt-nordend-passant-mit-waffe-bedroht/#Frankfurt-...">https://pressecop24.com/frankfurt-nordend-passant-mit-waffe-bedroht/#Frankfurt-...</a>
<input type="checkbox"/>	Telegram_Message	Gotthard	15.7.2020, 12:20:41
<input type="checkbox"/>	Telegram_Message	Enigma	3.8.2020, 12:28:02 Foto von Viola
<input type="checkbox"/>	Telegram_Message	Enigma	4.8.2020, 23:14:29 Der Gesundheitsexperte der SPD und ANTIFA Fanboy Lauterbach beim Fake New...
<input type="checkbox"/>	Telegram_Message	Enigma	1.8.2020, 04:18:33
<input type="checkbox"/>	Telegram_Message	Enigma	26.9.2020, 03:51:42
<input type="checkbox"/>	Telegram_Message	Wrieden-Zuidema	9.9.2020, 09:40:14
<input type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	1.1.2020, 16:12:59
<input type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	2.1.2020, 08:50:58
<input type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	4.1.2020, 18:38:39 Foto von Steffen
<input type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	4.1.2020, 20:40:08



# 3. Start with high threshold values

File View Analysis Help Languages

MunichInnovationLabs

DATA MEDIA UGC NETWORK MAP KEY PERSONS

Numerical Order  
Drag to select the interval  
0a6bb0788e ffa73eb8c5

DATA FILTERS

Filter Type or

Swastikas 4 Nodes

2 Nodes

172 Nodes

45 Nodes

44 Nodes

693 Nodes

1566 Nodes

THRESHOLDS KEYWORDS SIMILAR POSTS RECOGNIZED FACES ANTISEMITIC LANGUAGE VIOLENCE TERMS

Detection threshold for each Category Filter (0: lowest, 1: highest)

Swastikas

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1

Weapons

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1

Recognized Faces

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1

Faces

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1

Similar posts

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1

CLOSE

SHOW ALL SHOW FILTERED

COLORS THUMBNAILS

Displaying 1592 of 1592 images

# 5. Utilise different views: Simple sortable table view

File View Analysis Help Languages

MunichInnovationLabs

DATA MEDIA UGC NETWORK MAP KEY PERSONS

COLUMNS FILTERS DENSITY EXPORT

<input checked="" type="checkbox"/>	UGC Type	Username	Created Time	Contents
<input checked="" type="checkbox"/>	Telegram_Message	Mbeke	28.4.2020, 12:26:21	
<input checked="" type="checkbox"/>	Telegram_Message	Mbeke	15.5.2020, 05:59:57	
<input checked="" type="checkbox"/>	Telegram_Message	Pressecop24.com	11.7.2020, 06:21:53	<a href="https://pressecop24.com/frankfurt-nordend-passant-mit-waffe-bedroht/">https://pressecop24.com/frankfurt-nordend-passant-mit-waffe-bedroht/</a> #Frankfurt-...
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	3.8.2020, 12:28:02	Foto von Viola
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	4.8.2020, 23:14:29	Der Gesundheitsexperte der SPD und ANTIFA Fanboy Lauterbach beim Fake New...
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	26.9.2020, 03:51:42	
<input checked="" type="checkbox"/>	Telegram_Message	Wrieden-Zuidema	9.9.2020, 09:40:14	
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	1.1.2020, 16:12:59	
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	2.1.2020, 08:50:58	
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	2.1.2020, 14:06:07	#WDR ändert Kinderchor Liedtext 😊
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	4.1.2020, 14:52:38	
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	4.1.2020, 18:38:39	Foto von Steffen
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	4.1.2020, 20:49:08	
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	5.1.2020, 06:58:01	

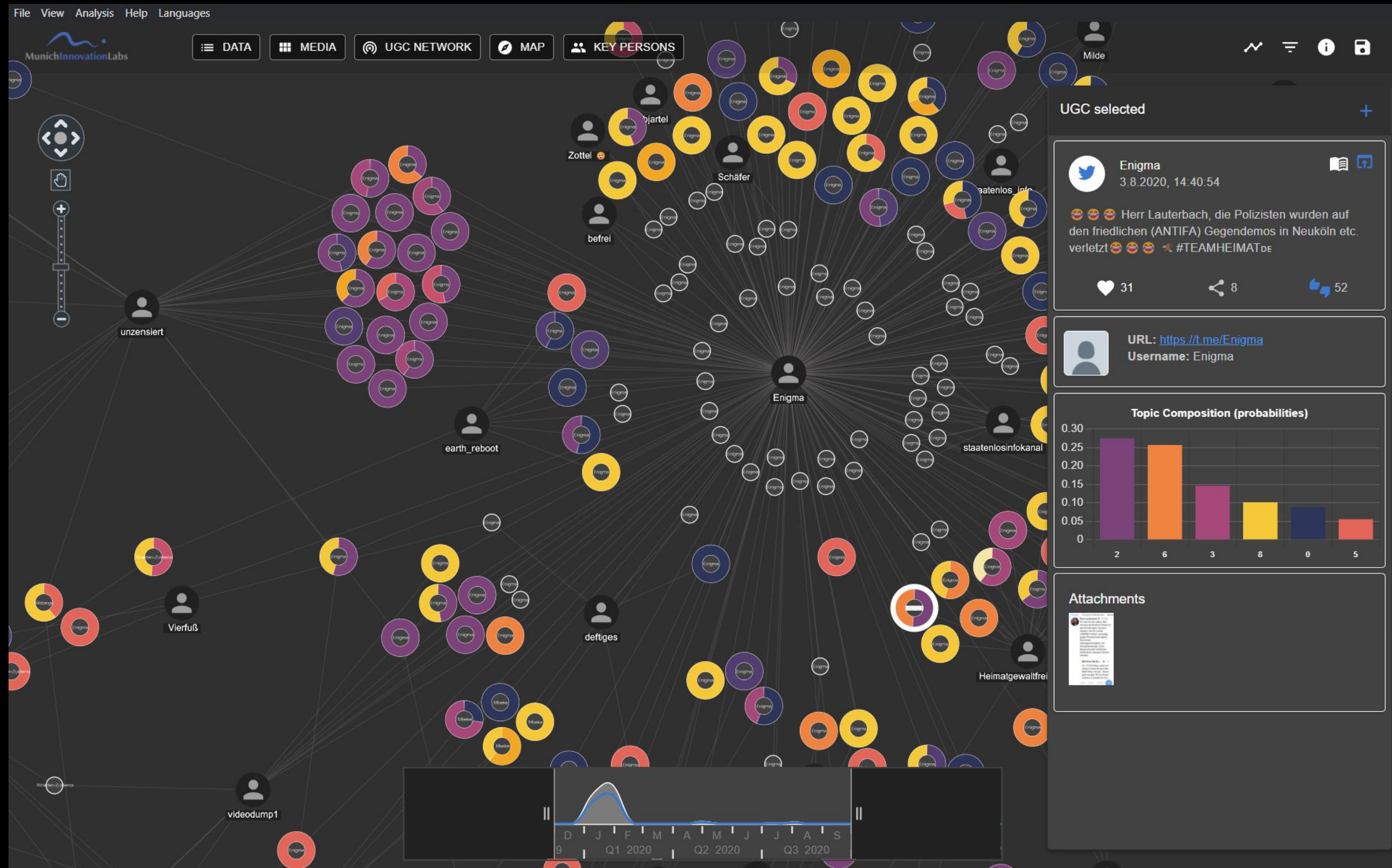
58 rows selected

Rows per page: 20 1-20 of 58

58 UGCs selected

- Mbeke  
15.5.2020, 05:59:57  
260 5 64
- Pressecop24.com  
11.7.2020, 06:21:53  
<https://pressecop24.com/frankfurt-nordend-passant-mit-waffe-bedroht/> #Frankfurt-Nordend: Passant mit Waffe bedroht!  
241 4 0
- Enigma  
3.8.2020, 12:28:02  
Foto von Viola  
179 5 2
- Enigma  
4.8.2020, 23:14:29  
Der Gesundheitsexperte der SPD und ANTIFA Fanboy Lauterbach beim Fake News verbreiten ⚠️ #TEAMHEIMAT DE  
5 8 -38
- Enigma  
26.9.2020, 03:51:42  
293 10 22

# UGC Network view for social network analysis



# Media view for closer inspection of attached media files

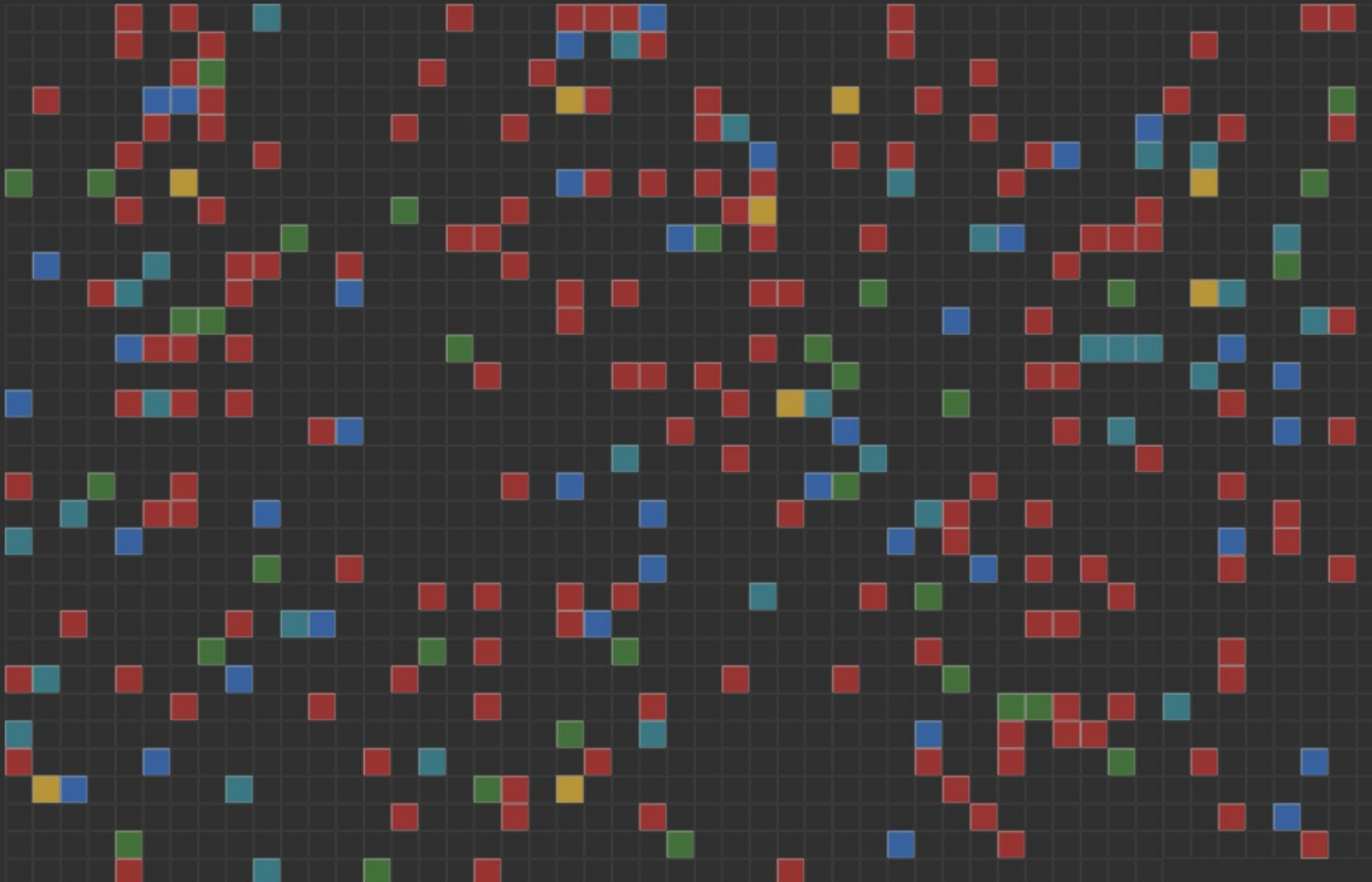
File View Analysis Help Languages

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DATA MEDIA UGC NETWORK MAP KEY PERSONS

Information icon Save icon

Numerical Order  
Drag to select the interval  
0a6bb0788e ffa73eb8c5



DATA FILTERS

Filter Type or

Swastikas	154 Nodes
Weapons	50 Nodes
Recognized Faces	267 Nodes
Antisemitic language	45 Nodes
Violence terms	44 Nodes
Faces	710 Nodes
OCR	1566 Nodes

Keyword Search  
Keywords

Similar Posts Search  
Similar posts

Options  
Square Sizing  
Fit to Screen

SHOW ALL SHOW FILTERED

COLORS THUMBNAILS

Displaying 267 of 1592 images

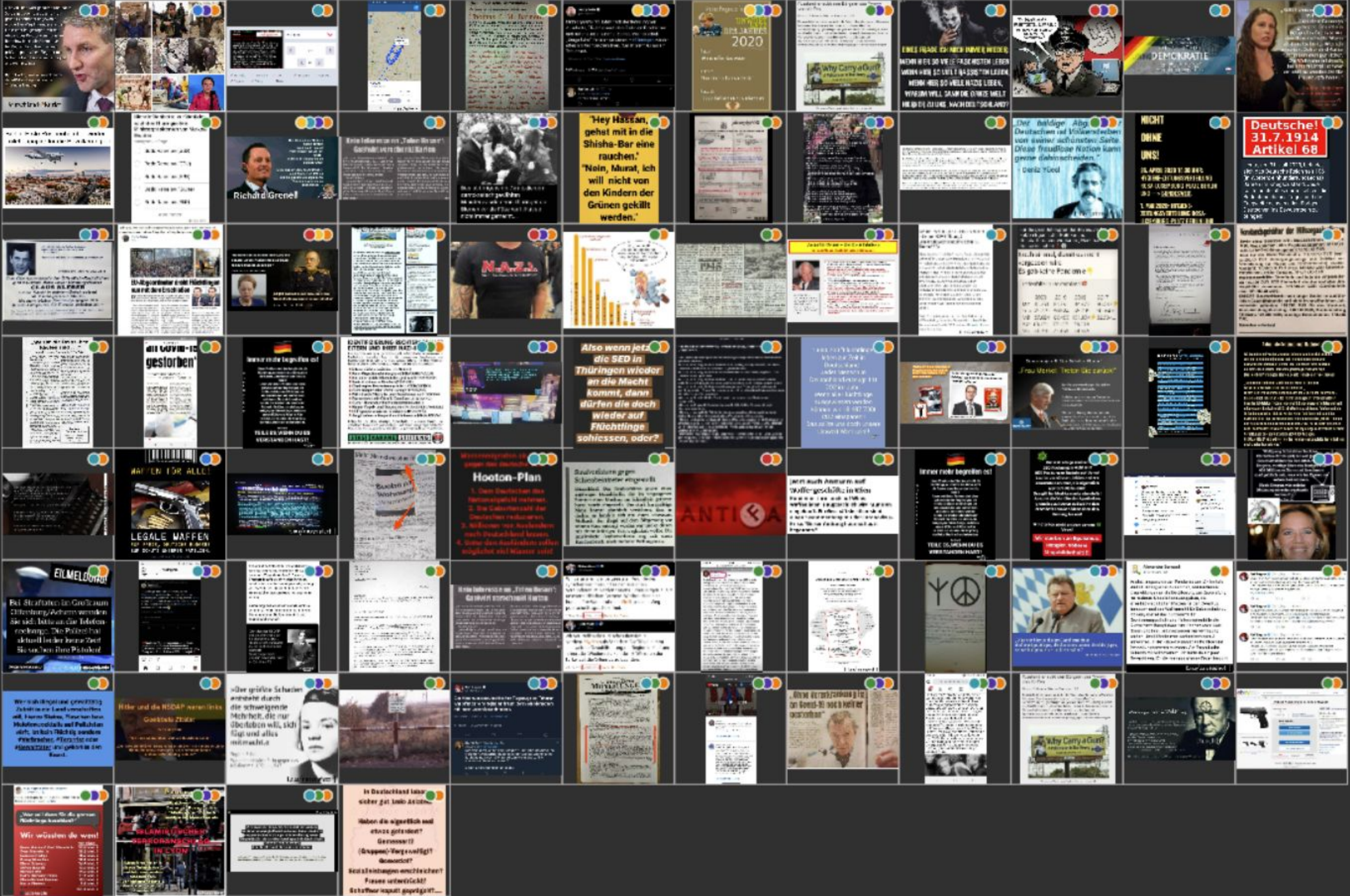
# Media view for closer inspection of attached media files

File View Analysis Help Languages

MunichInnovationLabs

DATA MEDIA UGC NETWORK MAP KEY PERSONS

Numerical Order  
Drag to select the interval  
0a6bb0788e ffa73eb8c5



DATA FILTERS

Filter Type or

Swastikas	4 Nodes
Weapons	2 Nodes
Recognized Faces	172 Nodes
Antisemitic language	45 Nodes
Violence terms	44 Nodes
Faces	693 Nodes
OCR	1566 Nodes

Keyword Search  
Keywords

Similar Posts Search  
Similar posts

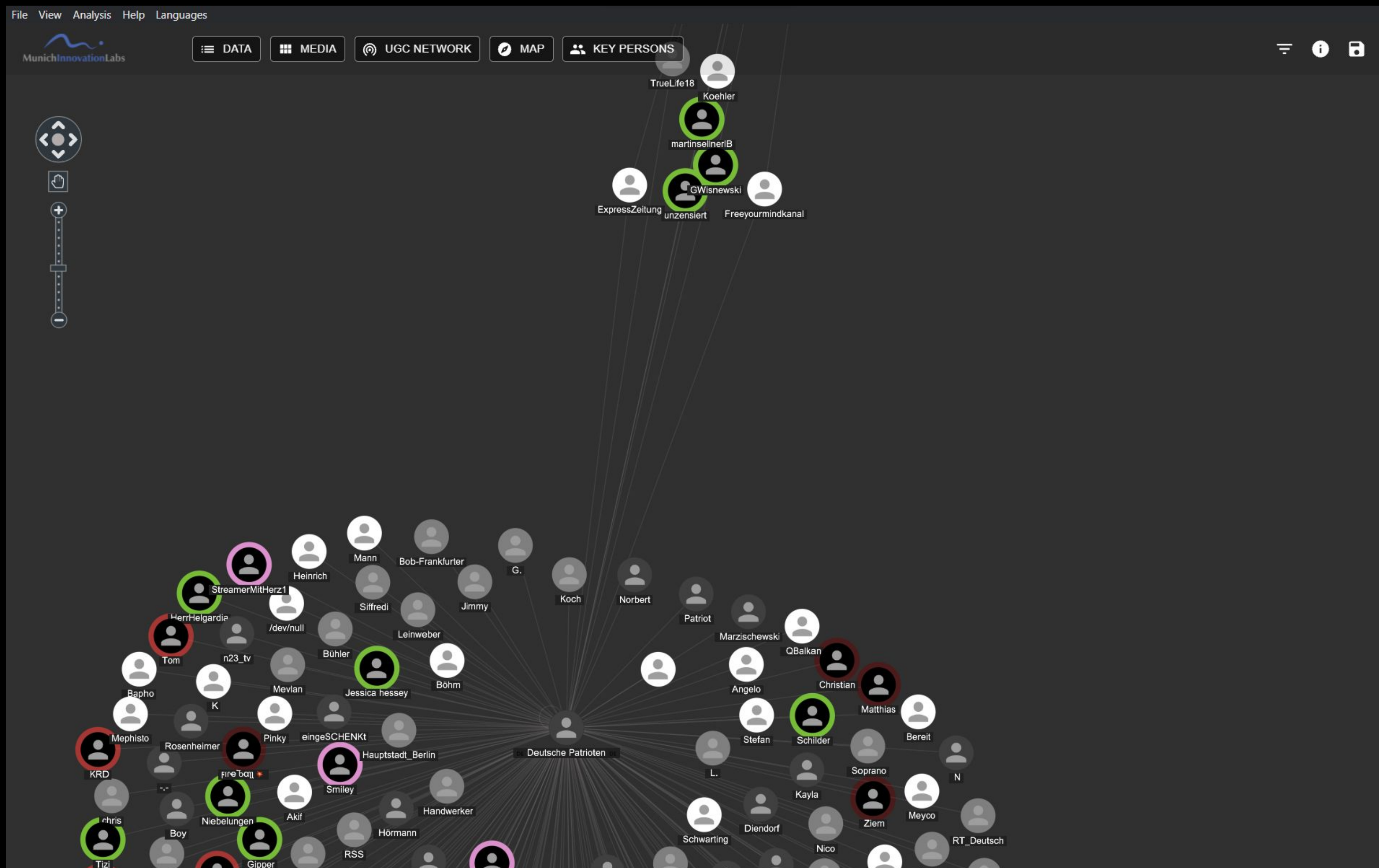
Options  
Square Sizing  
Fit to Screen

SHOW ALL SHOW FILTERED

COLORS THUMBNAILS

Displaying 88 of 1592 images


# Key persons network view for user connection analysis




# 6. Inspect filtered posts

File View Analysis Help Languages

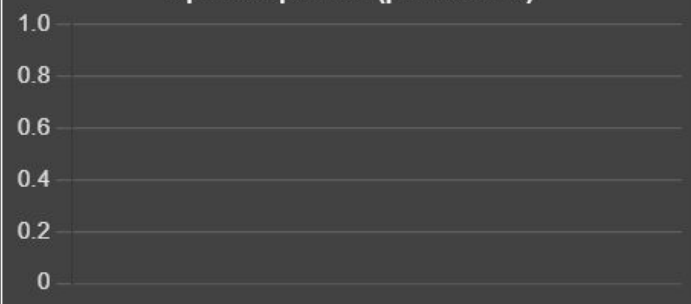
X UGC SAVE

 Mbeke  
15.5.2020, 05:59:57

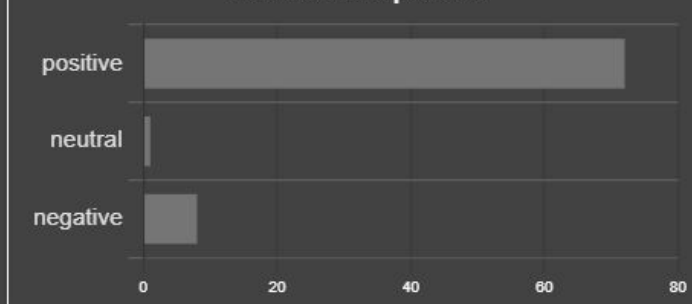
260 5 64

 URL: <https://t.me/Mbeke>  
Username: Mbeke

**Topic Composition (probabilities)**




**Sentiment Composition**



Sentiment	Percentage
positive	75
neutral	2
negative	23

**Attachments**



**Collections**

**Form**


**Tags**

**Description**

**Reliability** **Credibility**

**Location**

Latitude: 53,00127304075871 Longitude: 9,066334739599123



# 6. Inspect filtered posts

File View Analysis Help Languages

× 6d13caee59cc0c3e5aa39f0387ef9ebe.jpg



Unbekanntes Gesicht

swastika


AI PREDICTIONS



# 6. Inspect filtered posts


File View Analysis Help Languages

X UGC SAVE

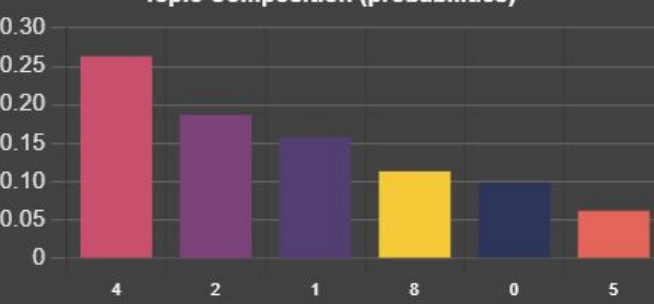
 **Enigma**  
4.8.2020, 23:14:29

Der Gesundheitsexperte der SPD und ANTIFA Fanboy Lauterbach beim Fake News verbreiten 🚩🚩 #TEAMHEIMATDE

5 ❤️ 8 🔄 -38 🗨️

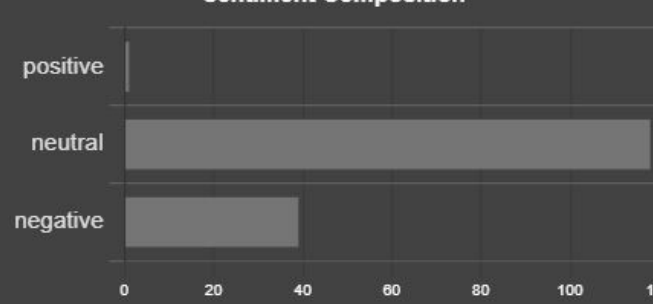
 **URL:** <https://t.me/Enigma>  
**Username:** Enigma

**Topic Composition (probabilities)**




Category	Probability
1	0.26
2	0.18
3	0.15
4	0.11
5	0.09
6	0.06

**Sentiment Composition**



Sentiment	Count
positive	0
neutral	120
negative	38

**Attachments**

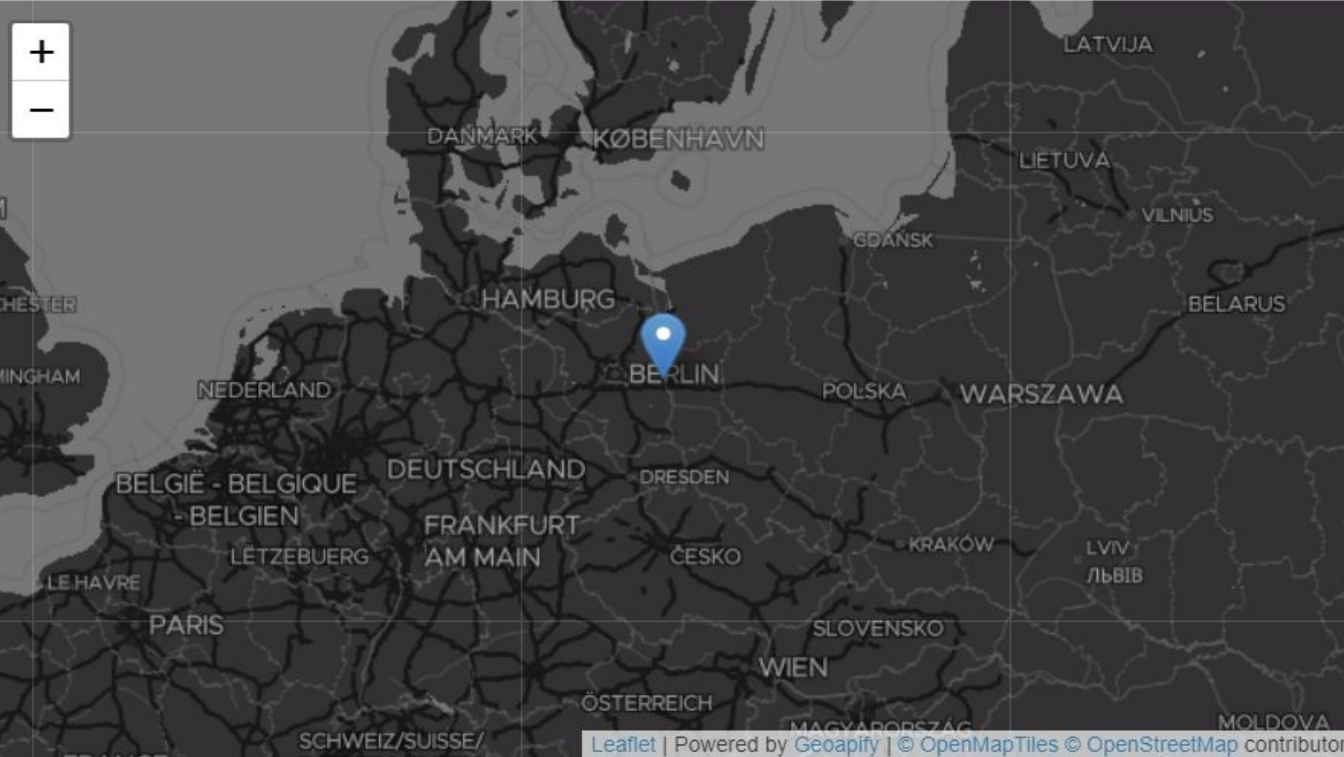


**Collections** ▾

**Form** ▾

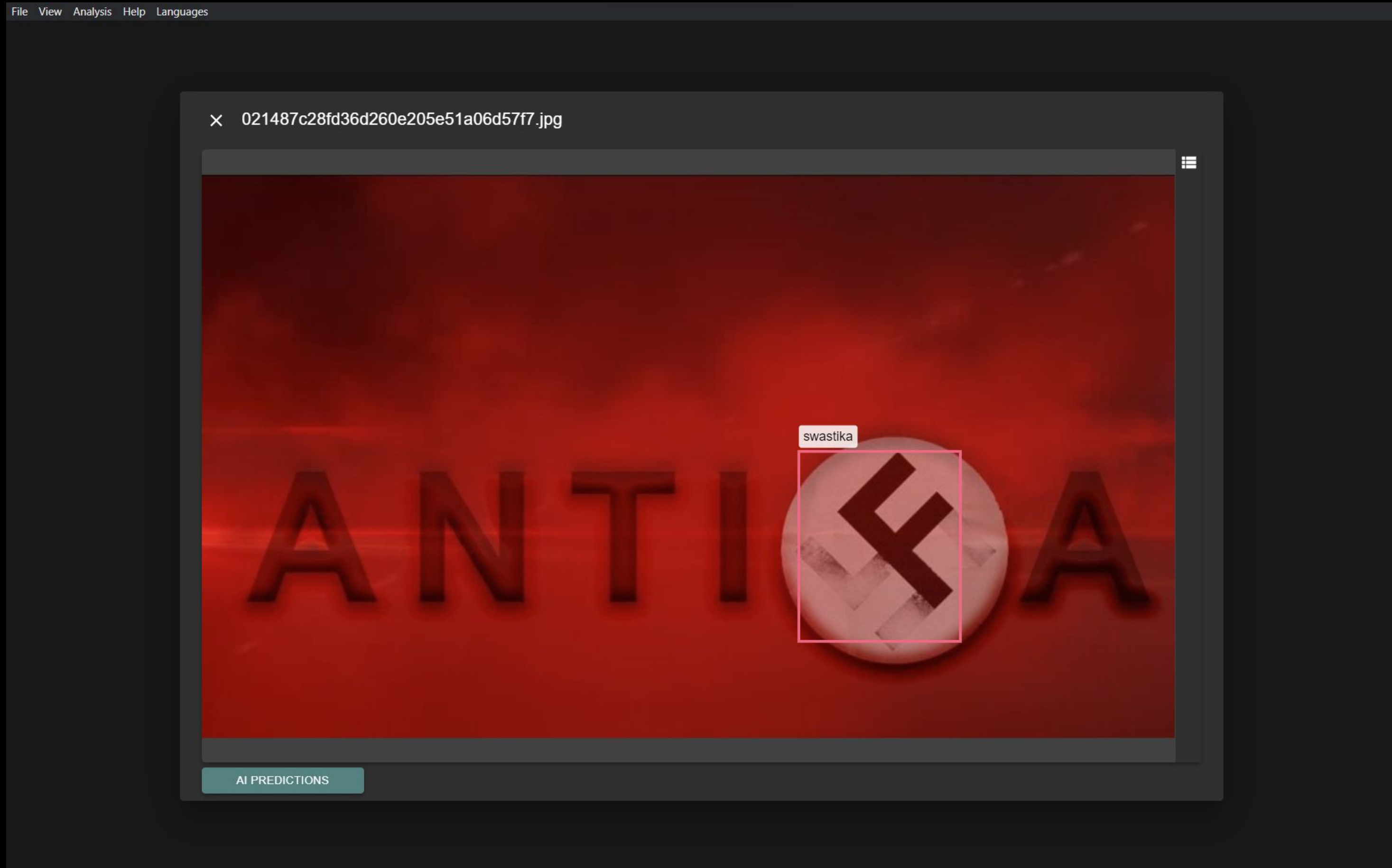
**Location** ▲

Latitude:  Longitude:



Leaflet | Powered by Geoapify | © OpenMapTiles © OpenStreetMap contributors

# 6. Inspect filtered posts



# 7. Remove false positives

File View Analysis Help Languages

× 22a06fa3998cfd4fef7e00f8177e78cf.jpg

Annotation Mode

1. swastika Swastikas 96%

2. Unbekanntes Gesicht Faces 92%

3. Unbekanntes Gesicht Faces 99%

swastika

swastika

Cancel Ok

Unbekanntes Gesicht

Unbekanntes Gesicht

§86A STGB

§130 STGB

OTHER OFFENSE

NO OFFENSE

CONFIRM

SIMILAR CASES

AI PREDICTIONS

25 / 120 < >

FILTER SETTINGS

ADD TO COLLECTION

# 8. Add relevant posts to the collection

File View Analysis Help Languages

MunichInnovationLabs

DATA MEDIA UGC NETWORK MAP KEY PERSONS

Collections

- Scenario 1
- Scenario 2
- + Create a new collection

Media Categories

Topics

Timebar

COLUMNS FILTERS DENSITY EXPORT

<input checked="" type="checkbox"/>	UGC Type	Username	Created Time	Credi... ↓	Relia...
<input checked="" type="checkbox"/>	Telegram_Message	Mbeke	28.4.2020, 12:26:21		
<input checked="" type="checkbox"/>	Telegram_Message	Mbeke	15.5.2020, 05:59:57		
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	3.8.2020, 12:28:02		
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	4.8.2020, 23:14:29		
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	26.9.2020, 03:51:42		
<input checked="" type="checkbox"/>	Telegram_Message	Wrieden-Zuidema	9.9.2020, 09:40:14		
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	1.1.2020, 16:12:59		
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	2.1.2020, 08:50:58		
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	4.1.2020, 18:38:39		
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	4.1.2020, 20:49:08		
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	5.1.2020, 11:58:42		
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	5.1.2020, 14:45:16		
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	5.1.2020, 14:51:14		

34 rows selected

Rows per page: 20 1-20 of 34

34 UGCs selected

Scenario 1  
Scenario 2

Mbeke  
28.4.2020, 12:26:21  
163 3 -92

Mbeke  
15.5.2020, 05:59:57  
260 5 64

Enigma  
3.8.2020, 12:28:02  
Foto von Viola  
179 5 2


Enigma  
4.8.2020, 23:14:29  
Der Gesundheitsexperte der SPD und ANTIFA Fanboy Lauterbach beim Fake News verbreiten ⚠️  
#TEAMHEIMAT DE  
5 8 -38

Enigma  
26.9.2020, 03:51:42  
293 10 22




# 9. Add custom analyst input


File View Analysis Help Languages

X UGC SAVE

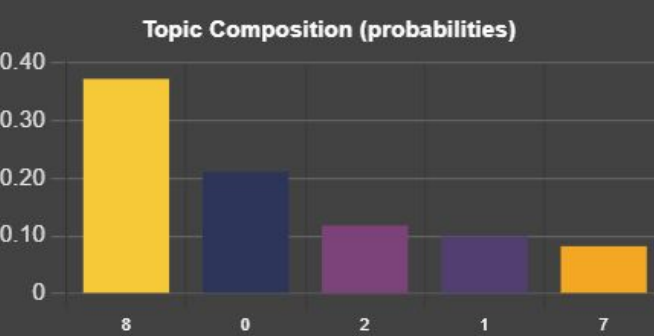
 **DE Deutsche Patrioten DE**  
9.1.2020, 06:48:05

Ich musste gerade meiner Schwester erklären, dass Soleimani kein Friedensengel, sondern ein Terrorpate war. Man muss ausdrücklich davor warnen, seine Informationen primär vom #Staatsfunk zu beziehen.

 257  8  -32

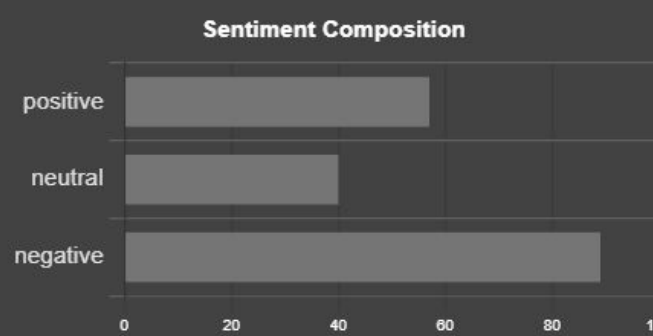
 **URL:** [https://t.me/DE\\_Deutsche\\_Patrioten\\_DE](https://t.me/DE_Deutsche_Patrioten_DE)  
**Username:** DE Deutsche Patrioten DE

**Topic Composition (probabilities)**




Topic	Probability
1	0.38
2	0.21
3	0.12
4	0.09
5	0.08

**Sentiment Composition**



Sentiment	Percentage
positive	58
neutral	38
negative	4

**Attachments**



Collections

Form


Tags

Description  
**Swastika hidden in "Antifa" sign**

Reliability  Credibility

Location

Latitude:  Longitude:



Map showing location pin over Hamburg, Germany. Visible labels include: LONDON, MANCHESTER, BIRMINGHAM, PARIS, NEDERLAND, BELGIË - BELGIQUE, DEUTSCHLAND, DANMARK, KØBENHAVN, BERLIN, POLSKA, WARSZAWA, HAMBURG, DRESDEN, FRANKFURT AM MAIN, LE HAVRE, SLOVENSKO, KRAKÓW, LIETUVA, LATVIJA, GDAŃSK, ŁÓDŹ, WROCLAW, PRAGUE, BRNO, ZAGREB, BUDAPEST, SOFIA, BELGRADE, ISTANBUL, ATHENS, MADRID, LISBON, OSAKA, TOKYO, SEOUL, BEIJING, SHANGHAI, HONG KONG, TAIPEI, MANILA, BANGKOK, JAKARTA, SYDNEY, MELBOURNE, AUCKLAND, WELLINGTON, CAIRO, NAIROBI, ADDIS ABABA, DAKAR, ABIDJAN, ACCRA, N'Djamena, Yaoundé, Kinshasa, Brazzaville, Libreville, Conakry, Freetown, Monrovia, Banjul, Bissau, Niamey, N'Djamena, Yaoundé, Kinshasa, Brazzaville, Libreville, Conakry, Freetown, Monrovia, Banjul, Bissau, Niamey.

# 10. Evaluate/export findings

The dashboard displays a map of Germany with several data points represented by colored circles. The points are labeled with 'Deutsche Patrioten' and 'Enigma'. The interface includes a menu with options like DATA, MEDIA, UGC NETWORK, MAP, and KEY PERSONS. A detailed view of a tweet is shown on the right, including the user profile, tweet content, and a bar chart titled 'Topic Composition (probabilities)'. The bar chart shows probabilities for various topics, with the highest probability being 0.30 for topic 2.

**UGC selected**

DE Deutsche Patrioten DE  
7.2.2020, 09:08:02

#Thüringen

45 3 105

URL: [https://t.me/DE\\_Deutsche\\_Patrioten\\_DE](https://t.me/DE_Deutsche_Patrioten_DE)  
Username: DE Deutsche Patrioten DE

**Topic Composition (probabilities)**

Topic	Probability
2	0.30
8	0.18
0	0.15
5	0.10
6	0.08
3	0.07
1	0.05

**Attachments**

Leaflet | Powered by Geopify | © OpenMapTiles © OpenStreetMap contributors

# Scenario 2

Finding uncredible/unreliable claims, their spread and identifying the individuals responsible for them

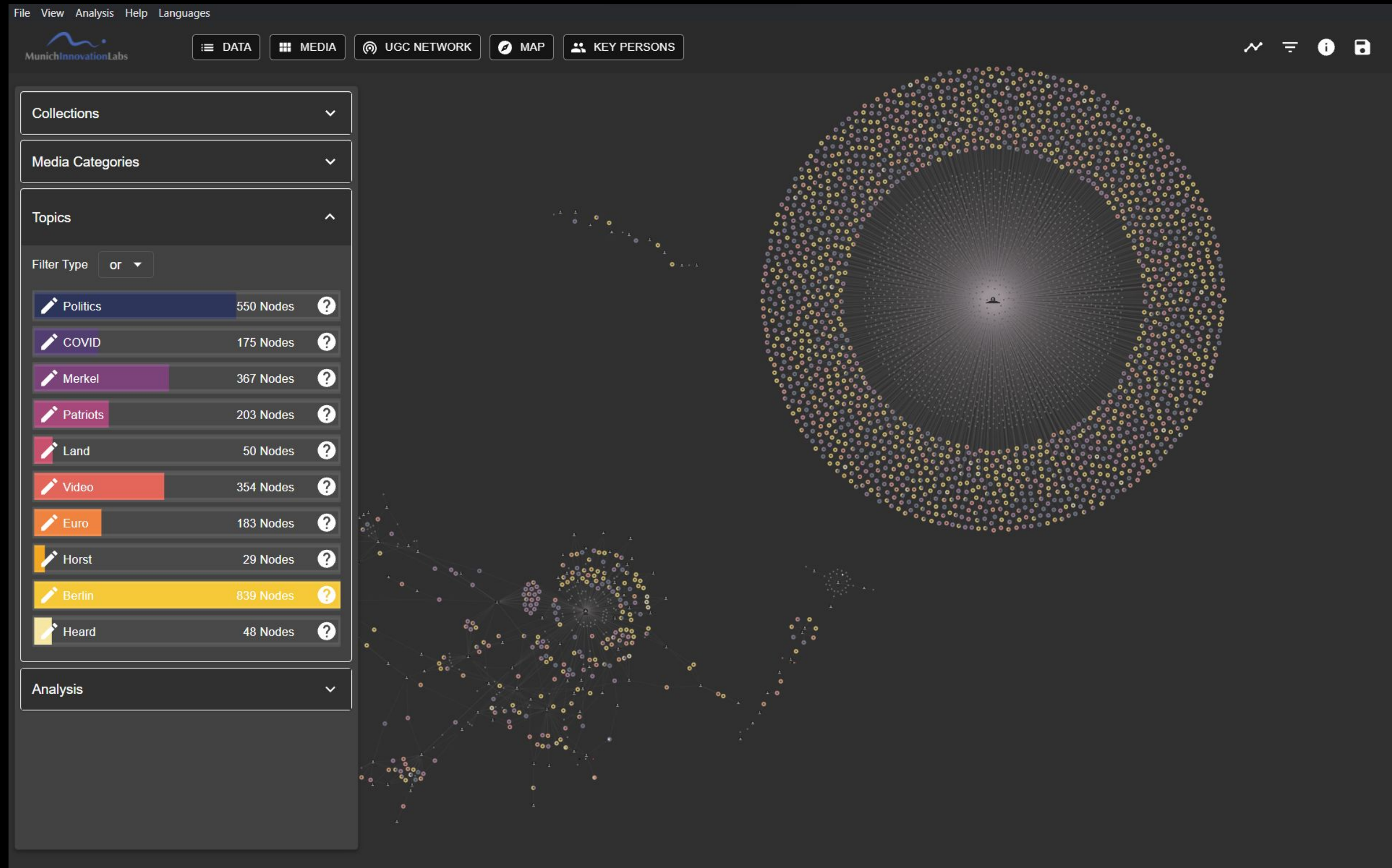
# 1. Create a new collection

The screenshot displays the MunichInnovationLabs web application interface. The top navigation bar includes 'File', 'View', 'Analysis', 'Help', and 'Languages'. Below this, there are tabs for 'DATA', 'MEDIA', 'UGC NETWORK', 'MAP', and 'KEY PERSONS'. The left sidebar contains sections for 'Collections', 'Media Categories', 'Topics', and 'Timebar'. The 'Collections' section shows 'Scenario 1' and 'Scenario 2', with a '+ Create a new collection' button. The 'Topics' section lists various categories like 'Politics', 'COVID', 'Merkel', etc., with node counts. The main area shows a table of data with columns: UGC Type, Username, Created Time, and Contents. A modal dialog titled 'Update Name' is open, showing a text input field with 'Scenario 2' and 'UPDATE' and 'CANCEL' buttons. The table data includes rows for 'Telegram\_Message' from users like 'Mephisto', 'L...', 'Mbeke', 'Enigma', 'Chris', 'Mígu Hêrz', and 'Laurents'.

UGC Type	Username	Created Time	Contents
Telegram_Message	Mephisto	22.7.2020, 17:20:27	Hallo Matthes mein Name. Ich bin hier um mich zu informieren und zu diskutieren, ...
Telegram_Message	L...	22.4.2020, 15:24:18	
Telegram_Message	Mbeke	23.4.2020, 07:56:13	Bremen macht auch mit – Maskenpflicht in ganz Deutschland "Alle 16 Bundesländ...
Telegram_Message	Mbeke	23.4.2020, 11:47:37	@QlobalFun
Telegram_Message	Enigma	00:00	SHARIA POLIZEI IN BERLIN: BRUTALE MISSHANDLUNGEN GEGEN "UNGLÄU...
Telegram_Message	Enigma	03:04	Etwas tut sich da... @unzensiert
Telegram_Message	Enigma	06:46	Hier was gutes zur Verbreitung über den WhatsApp Status 👍 Eingesendet via @...
Telegram_Message	Enigma	09:40	Die WELT is ja richtig witzig heute!!! 😂😂😂
Telegram_Message	Chris	6.5.2020, 20:08:26	Hab aber nix von einer Demo in HB mitbekommen
Telegram_Message	L...	7.5.2020, 12:27:15	Video von Björn Clemens
Telegram_Message	Enigma	8.5.2020, 05:07:27	Hier nochmal das Video. Danke an "Onkel Erwin"! @deftiges
Telegram_Message	Mígu Hêrz	28.6.2020, 18:56:02	Wo genau liegt eigentlich Mitteldeutschland? 🤔 also ich muss das gerade jemand...
Telegram_Message	Laurents	10.7.2020, 21:15:15	👍👍 Billy the Gates...oder wie man Kohle scheffelt...👍👍 Wisst ihr was? Hört ei...
Telegram_Message	Dinky	22.7.2020, 13:58:44	Ihr seid doch alle nicht sauber! Als deutsche schämt man sich für euch... ach und...



## 2. Look at the various identified topics



# 3. Choose and filter by topic(s) relevant to your research


The screenshot displays the MunichInnovationLabs interface. The top navigation bar includes 'File', 'View', 'Analysis', 'Help', and 'Languages'. Below this, there are tabs for 'DATA', 'MEDIA', 'UGC NETWORK', 'MAP', and 'KEY PERSONS'. The left sidebar contains several filterable sections: 'Collections', 'Media Categories', and 'Topics'. The 'Topics' section is expanded, showing a list of topics with their respective node counts. The 'COVID' topic is highlighted in purple, indicating it is selected. A 'Filter Type' dropdown is set to 'or'. The main area shows a network graph with nodes and connections. A central node is labeled 'Enigma'. Other nodes include 'oyemedia', 'earth\_reboot', 'Kulturstudio', 'Kilozango', and 'Mbeke'. A large text overlay is positioned over the graph, displaying the following text: 'Prozent bekommen Wuhan Virus Frau SPD Volk sieht Coronavirus bleiben'. The text is arranged in a stylized, overlapping manner with various colors.

Topic	Nodes
Politics	25 Nodes
<b>COVID</b>	<b>175 Nodes</b>
Merkel	12 Nodes
Patriots	5 Nodes
Land	0 Nodes
Video	12 Nodes
Euro	9 Nodes
Horst	0 Nodes
Berlin	36 Nodes
Heard	2 Nodes

# 4. Assign credibility/reliability scores


File View Analysis Help Languages

X UGC SAVE

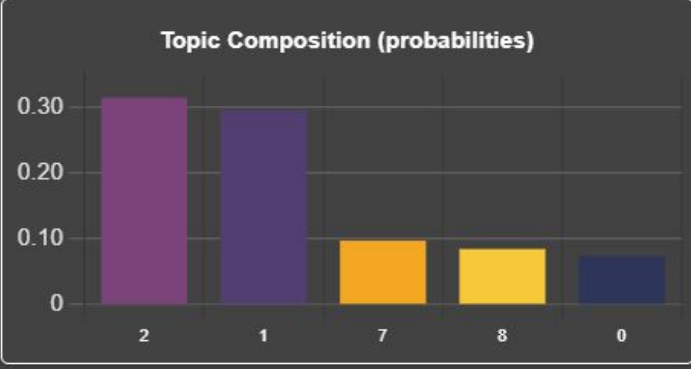
 **Enigma**  
18.5.2020, 04:35:08

Bill Gates hat am Mittwoch bei CNBC verraten, warum er uns alle impfen will: Für einen Gewinn von 2000 Prozent. 💰

66 ❤️ 8 🔄 144 💬

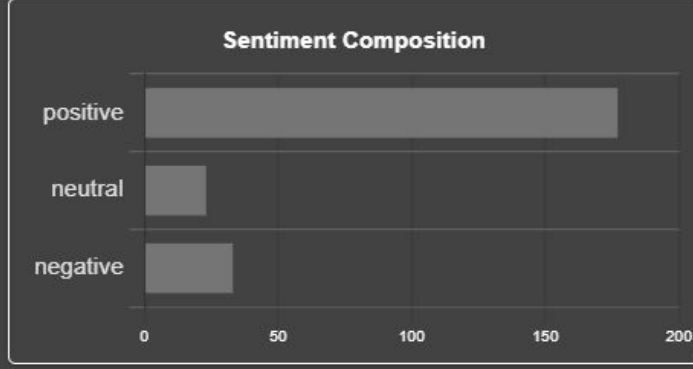
 **URL:** <https://t.me/Enigma>  
**Username:** Enigma

**Topic Composition (probabilities)**



Category	Probability
2	0.30
1	0.28
7	0.10
8	0.08
0	0.04

**Sentiment Composition**



Sentiment	Count
positive	180
neutral	20
negative	30

**Attachments**  
UGC has no attachments

**Collections** ▾

**Form** ▲

**Tags** ▾

**Description**

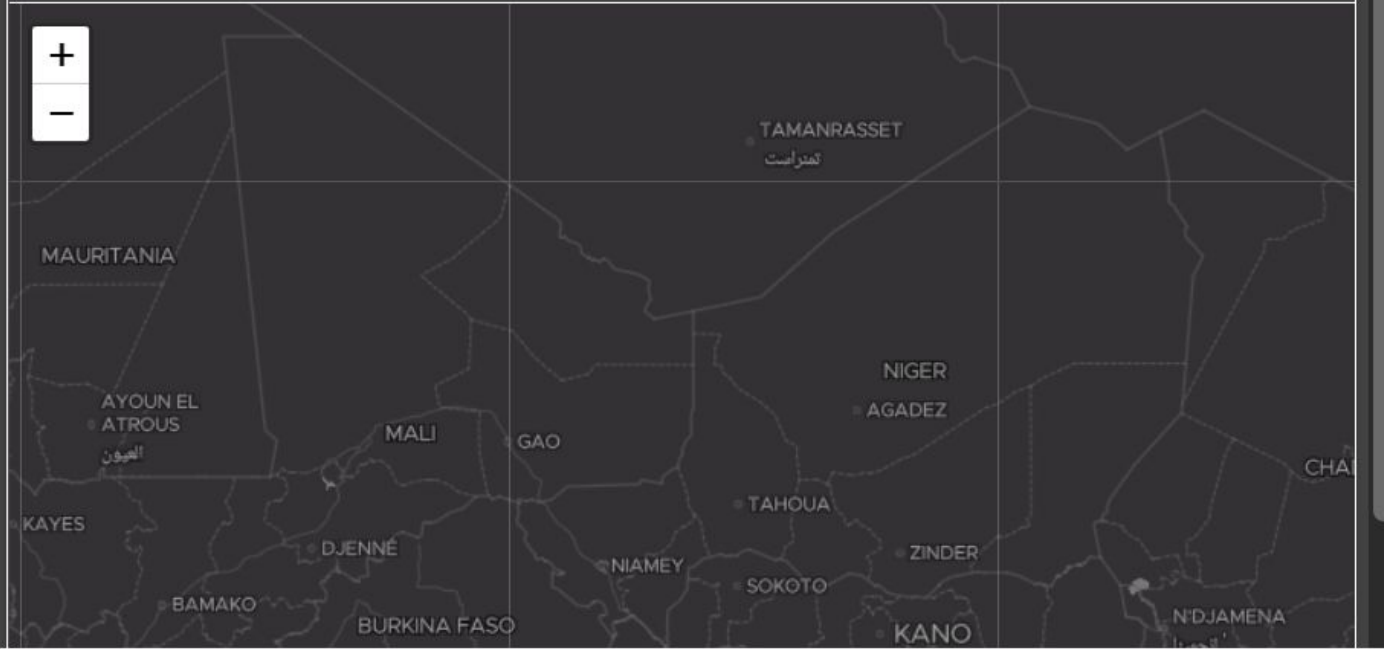
Reliability: **Not usually reliable** ▾

- Confirmed by other sources
- Probably True
- Possibly True
- Doubtful
- Improbable**
- Truth cannot be judged

**Location** ▲

Latitude:

Longitude:




Map showing location with zoom controls (+, -).

# Assign credibility/reliability scores


File View Analysis Help Languages

X UGC SAVE

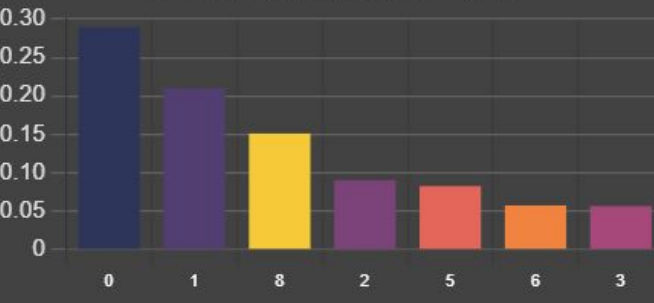
 Pressecop24.com  
11.7.2020, 05:48:49

<https://pressecop24.com/belgrad-proteste-gegen-die-anti-corona-massnahmen-der-regierung-gehen-weiter/> Belgrad:  
Proteste gegen die Anti-Corona-Maßnahmen der Regierung gehen weiter

♥ 276    ↗ 12    🗨️ 0

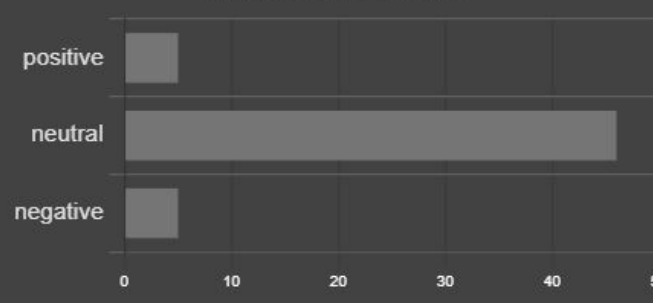
 URL: <https://t.me/Pressecop24.com>  
Username: Pressecop24.com

**Topic Composition (probabilities)**




Category	Probability
0	0.28
1	0.21
8	0.15
2	0.08
5	0.07
6	0.05
3	0.05

**Sentiment Composition**



Sentiment	Count
positive	5
neutral	45
negative	5

**Attachments**



**Collections** ▾

**Form** ▲

**Tags** ▾

**Description**

Completely reliable

Usually reliable

Fairly reliable

Not usually reliable

Unreliable

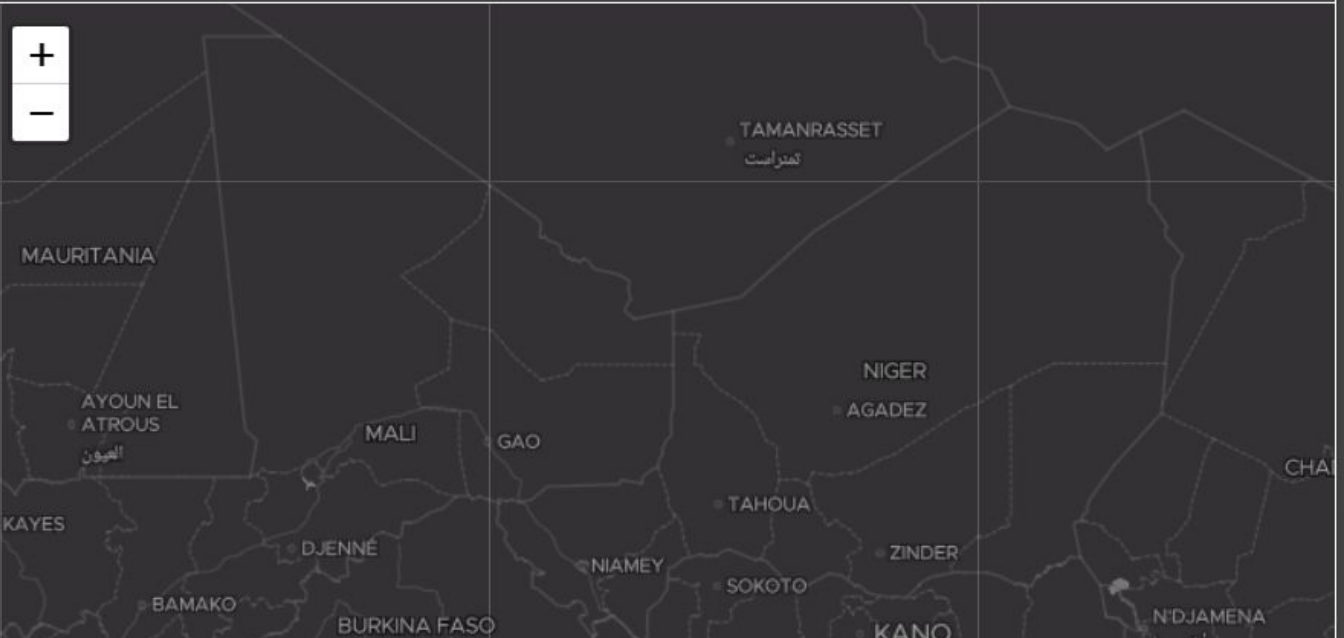
Reliability cannot be judged

Latitude

Longitude

Credibility

Possibly True ▾



# 5. Sort and filter by credibility/reliability

File View Analysis Help Languages

MunichInnovationLabs

DATA MEDIA UGC NETWORK MAP KEY PERSONS

COLUMNS FILTERS DENSITY EXPORT

<input checked="" type="checkbox"/>	UGC Type	Username	Created Time	Credi... ↓	Relia...	Contents
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	26.4.2020, 01:03:22	5	D	Bitte weit verbreiten es ist sehr bewegend. <a href="https://www.youtube.com/watch?v=pwnavgjSP8Y&amp;feature=share">https://www...</a>
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	28.4.2020, 00:33:59	5	D	Merkel plante 2017: "Wenn wir noch einmal eine Pan...
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	1.5.2020, 23:45:11	5	D	Swisscom: Ausbau des 5G-Netzes stockt wegen Mor...
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	11.5.2020, 03:53:44	5	D	Aue/Sachsen 1.5.2020 Das Volk steht endlich auf 🇩🇪
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	18.5.2020, 04:35:08	5	D	Bill Gates hat am Mittwoch bei CNBC verraten, waru...
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	8.5.2020, 01:48:40	5	D	Das Volk hat die Nase voll von diesem Polizeistaat
<input checked="" type="checkbox"/>	Telegram_Message	Ziem	29.6.2020, 06:36:22	5	D	Wer ist Frau Merkel?
<input checked="" type="checkbox"/>	Telegram_Message	Enigma	2.8.2020, 16:00:32	5	D	**Epstein Gishlaine Maxwell Gerichtsakten Teil 1 **e...
<input checked="" type="checkbox"/>	Telegram_Message	Vierfuß	26.9.2020, 13:27:31	5	C	Wäre äußerst wichtig, das Ergebnis zu erfahren. Der...
<input checked="" type="checkbox"/>	Telegram_Message	Chris	4.5.2020, 01:41:52	4	C	Genau das meinte ich. Eine Frechheit sowas. Was ni...
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	1.1.2020, 12:27:10	4	B	Nach Merkel hier mal eine kluge Frau: Wie gefährlich...
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	2.1.2020, 09:22:04	4	B	Das einmal stolze Deutschland - heute ein Clownland
<input checked="" type="checkbox"/>	Telegram_Message	DE Deutsche Patrioten DE	2.1.2020, 11:55:30	4	B	Die #SPD so: Wenn Ihr euch sowas (freiwillig) in den...

175 rows selected

Rows per page: 20 1-20 of 175

175 UGCs selected

Enigma 26.4.2020, 01:03:22

Bitte weit verbreiten es ist sehr bewegend. [https://www...](https://www.youtube.com/watch?v=pwnavgjSP8Y&feature=share)

228 1 -120

Enigma 28.4.2020, 00:33:59

Merkel plante 2017: "Wenn wir noch einmal eine Pandemie von der Sorte der Spanischen Grippe bekommen würden..." W.I.M. 🇩🇪 🇩🇪 🇩🇪

7 5 112

Enigma 1.5.2020, 23:45:11

Swisscom: Ausbau des 5G-Netzes stockt wegen Moratorien der Gegner - Golem.de <https://www.golem.de/news/swisscom-ausbau-des-5g-netzes-stockt-wegen-moratorien-der-gegner-2004-148210.html> Die Swisscom sieht sich durch Proteste nicht in der Lage, das 5G- und 4G-Netz weiter ausreichend auszubauen. Die Proteste in der Schweiz behindern den weiteren Ausbau von 5G. Das erklärte die Swisscom am 30. April 2020. "Aufgrund aktueller Einschränkungen wie Moratorien in einzelnen Kantonen stockt der Ausbau des Mobilfunknetzes und damit die Schaffung dringend notwendiger Kapazitäten sowohl für 4G wie auch 5G." ⚠️ Wehren lohnt sich ⚠️ (mg)

102 7 8

Live Demo

# Takeaways

- Time for finding relevant information can be reduced by more than 90%
- Completely manually processing these amounts of data is often not realistic
- The system is designed to be flexible
  - Supports different sources of data
  - AI algorithms can be adjusted depending on the use case
  - Additional analyst meta data input depending on the use case
  - Different export options/report generation planned

# Funding acknowledgment

This work has been co-funded by the German Federal Ministry of Education and Research (BMBWF) und the project grant “KISTRA: Einsatz von KI zur Früherkennung von Straftaten” (Application of AI for early recognition of criminal offences)



GEFÖRDERT VOM



Bundesministerium  
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