

BIG DATA POLICING: HOE KAN SAMENWERKING TUSSEN WETENSCHAP EN PRAKTIJK HET POLITIEWERK VERBETEREN?

PROF. DR. WIM HARDYNS

Tweedaagse residentiële conferentie: Samenspel of
strijd? De dans tussen wetenschap, politie en beleid

Centre for Policing and Security (CPS)

9 mei 2025





- Professor Criminologie (Universiteit Gent) en Veiligheidswetenschappen (Universiteit Antwerpen)
- ERC grant holder BIGDATPOL
- <https://www.linkedin.com/in/wim-hardyns-7250a129/>



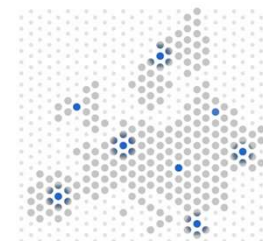
[Home](#) > [News](#) > Six Ghent University researchers win ERC Consolidator Grant

Six Ghent University researchers win ERC Consolidator Grant

[Bekijk Nederlandse versie](#)

(31-01-2023) Six Ghent University researchers win an ERC Consolidator Grant. This important European research grant enables them to continue their groundbreaking research.

521 researchers have won 2022 European Research Council (ERC) Consolidator Grants. Among them are six Ghent University researchers (clockwise): Diego Mialles, Michal Heller, Francis Impens, Cosmin Cercel, An Ghysels, and Wim Hardyns. With this result, **our university again performs excellently**, leaving only major institutions as the National Center for Scientific Research (CNRS), Max Planck Society and University of Cambridge ahead. The funding – worth in total 6657 million – is part of the EU's Horizon Europe programme. It will help excellent scientists, who have 7 to 12 years' experience after their PhDs, to pursue their most promising ideas.



BIGDATPOL

Towards an evidence-based
model for big data policing

Professor criminologie wil binnenkort misdaad voorspellen én voorkomen



MINORITY REPORT



1. IT'S ALL ABOUT THEORY, EVIDENCE AND METHODS
2. VAN PREDICTIVE POLICING NAAR BIG DATA POLICING
3. KENNISMAKING MET HET BIGDATPOL
ONDERZOEKSPROGRAMMA
4. DE TOEKOMST

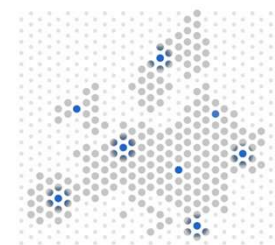
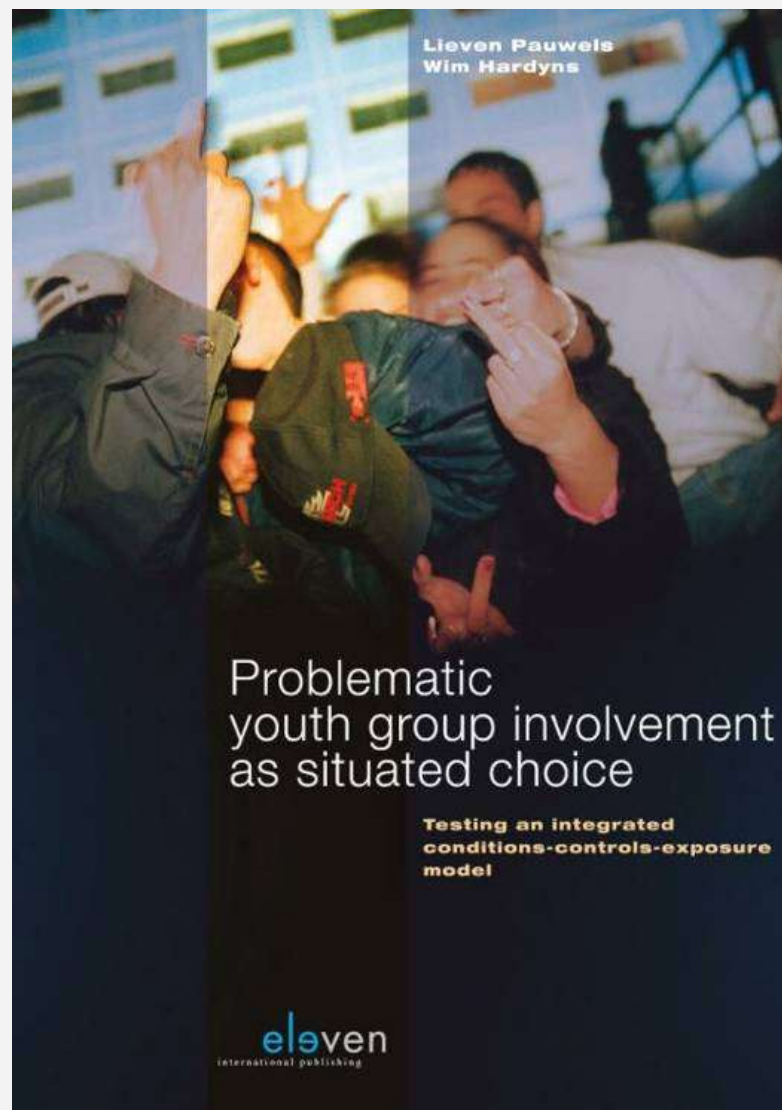
AGENDA





IT 'S ALL ABOUT THEORY, EVIDENCE AND METHODS

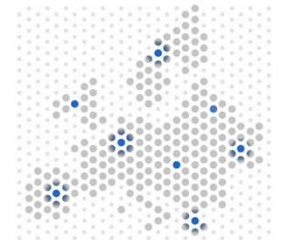
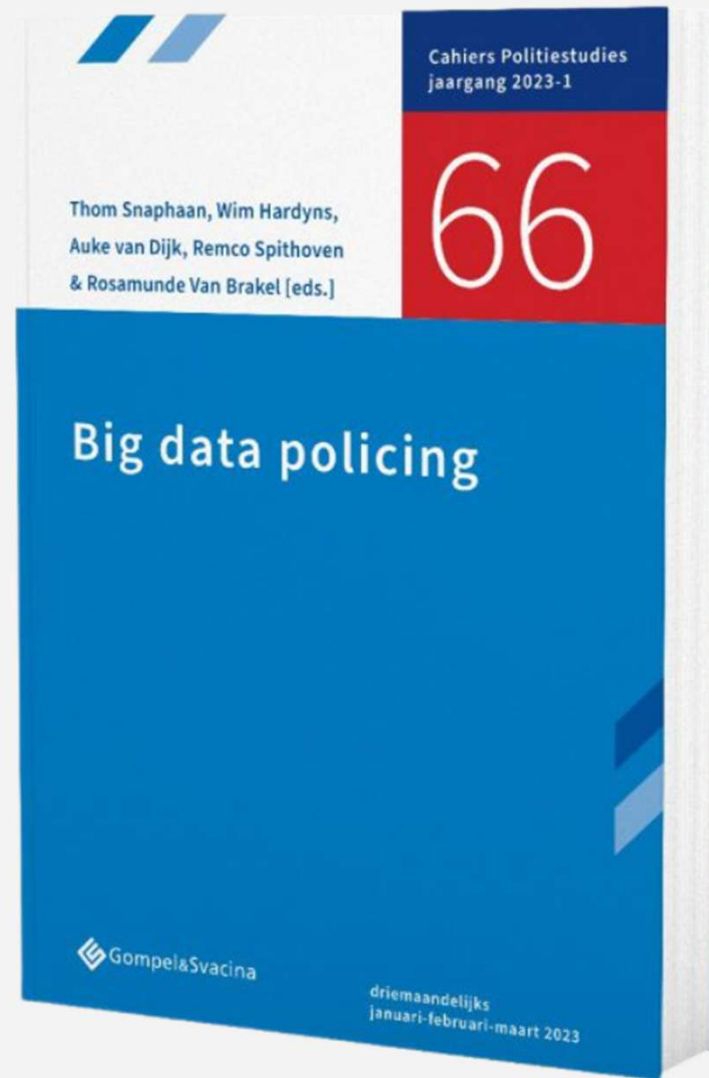
1



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VAN PREDICTIVE POLICING NAAR BIG DATA POLICING

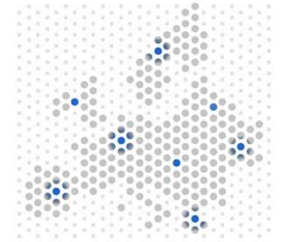
2

PREDICTIVE POLICING

What's in a name?

Predictieve analysetechnieken worden gebruikt om:

1. potentieel daderschap te voorspellen
2. potentieel slachtofferschap te voorspellen
3. te voorspellen **WAAR** en **WANNEER** er een verhoogd risico op criminaliteit bestaat



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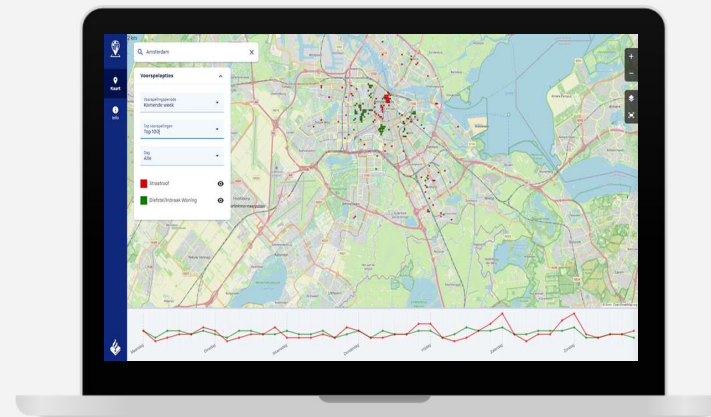
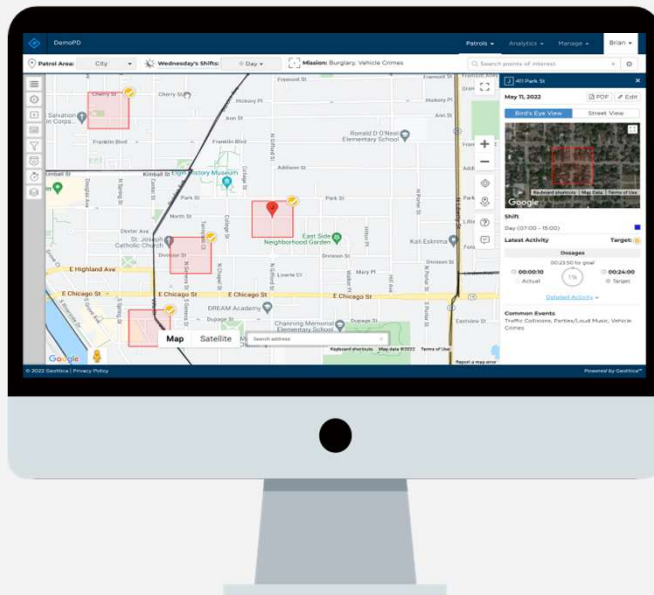
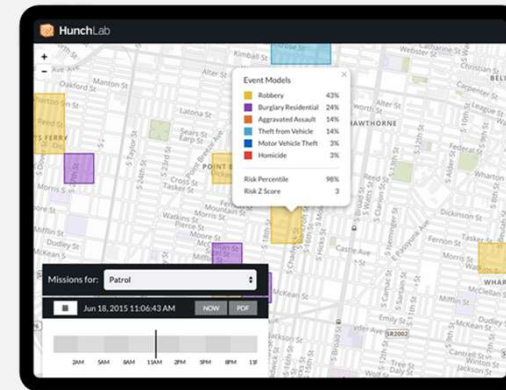
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Voorbeelden van toepassingen

Hunchlab (overgenomen
door SoundThinking)

Geolitica
(voormalig PredPol)



Criminaliteits Anticipatie Systeem
(Nederland)



BIGDATPOL 2023-2028

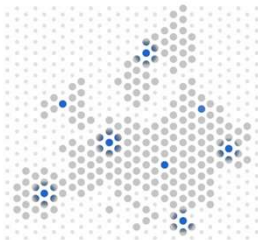
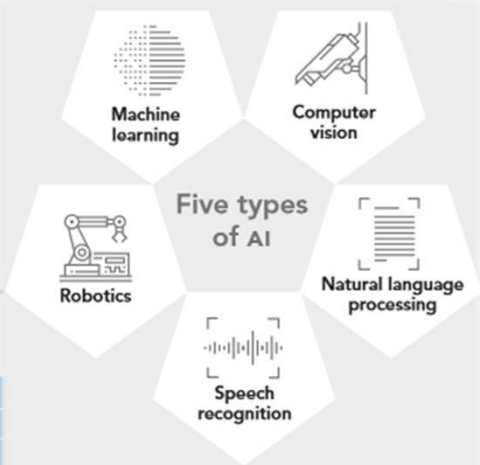
STAP 1

BIG DATA-
VERZAMELING



STAP 2

BIG DATA
ANALYTICS & AI



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STAP 3

BRUIKBARE
OUTPUT



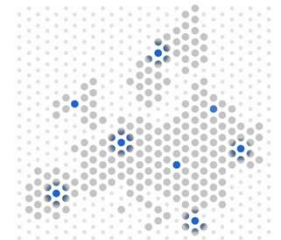
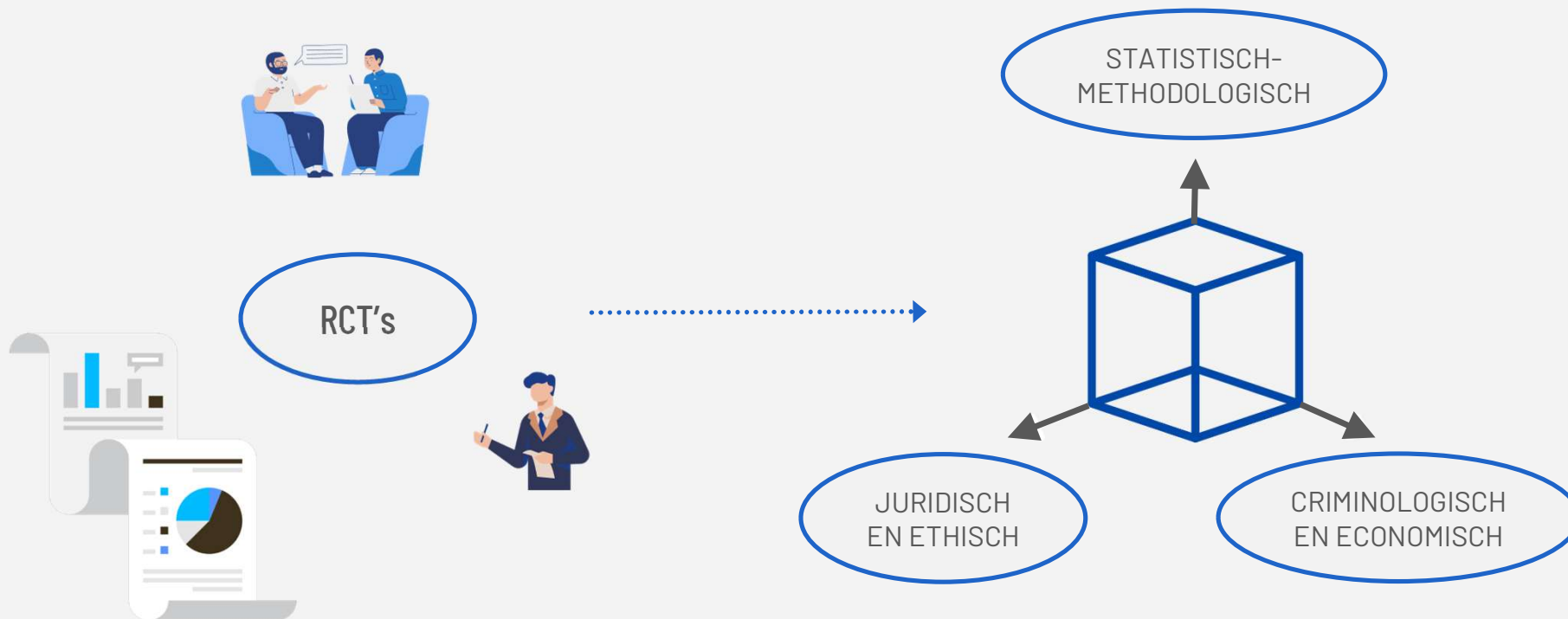
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Doel van het project

Ontwikkelen van een evidence-based 3D-model voor big data policing



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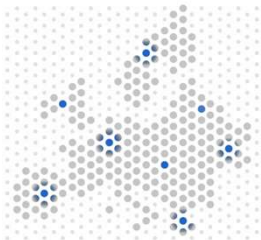


BIG DATA ANALYTICS IN POLITIEWERK

Twee typologieën samengevoegd

		Big data analytics			
		Beschrijvend	Verklarend	Voorspellend	Voor-schrijvend
Typen van politie-werk	Intelligence		Bijv. Helios		
	Straatwerk	Bijv. Criminaltiteits -ratio's		Tijd-ruimtelijk slachtoffers daders	
	Opsporing en recherche			Bijv. Threat To Life	

(Khalifa, Snaphaan, Wijsman, Landman & Hardyns, 2024)
<https://www.bjutijdschriften.nl/tijdschrift/tijdschriftveiligheid/2024/1-2/TvV-D-24-00009>



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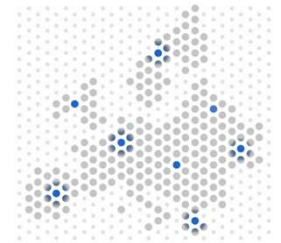
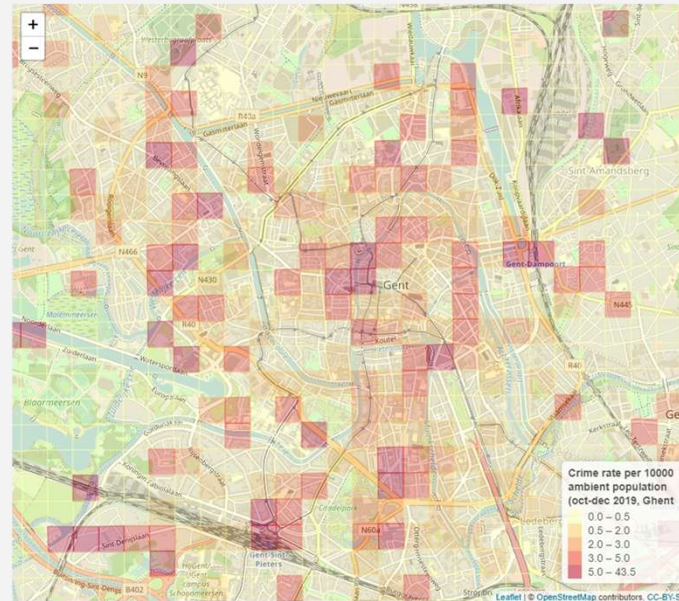
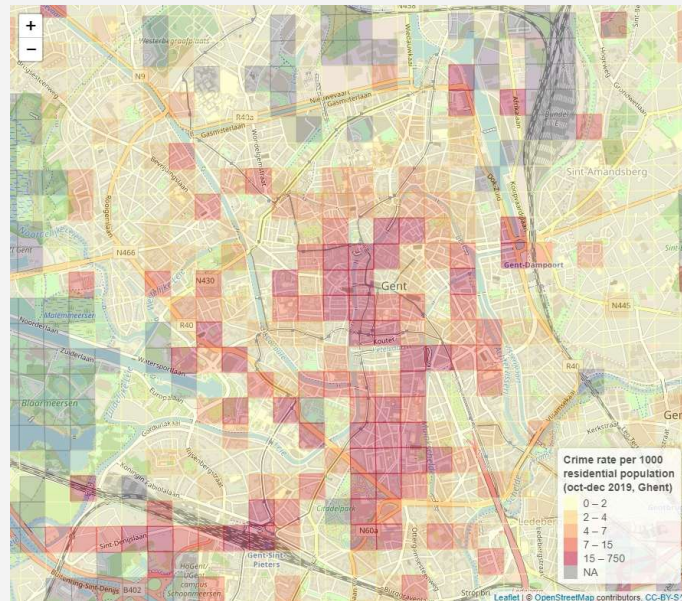
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KENNISMAKING MET HET BIGDATPOL ONDERZOEKSPROGRAMMA

3

MOBIELE-TELEFOONDATA

- Gent, 3 maanden aan data
- 595.858.852 ruwe datapunten



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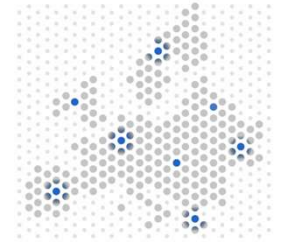
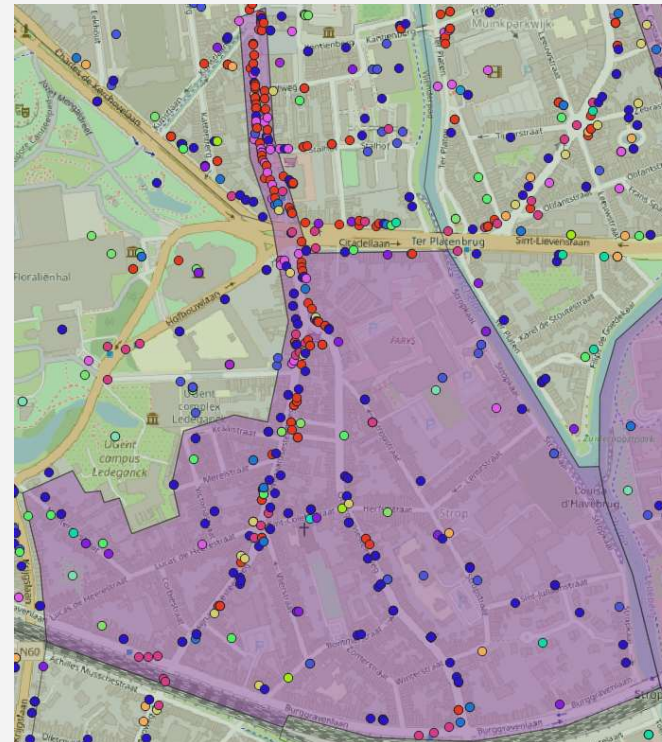
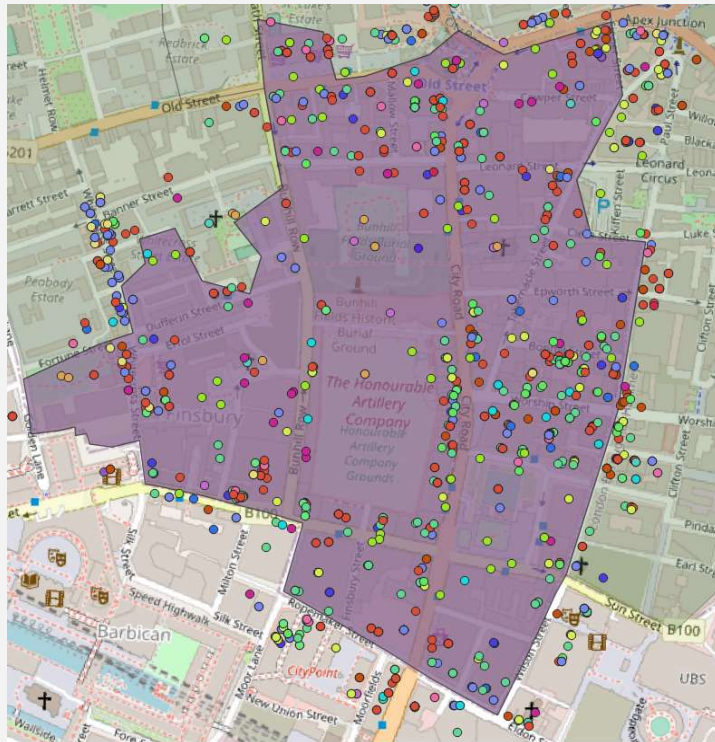
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RATINGS VAN GOOGLE MAPS GEBRUIKERS

- Gent en Londen, 2022
- 311.120 en 990.203 ratings



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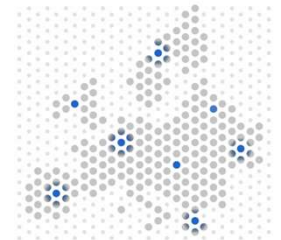
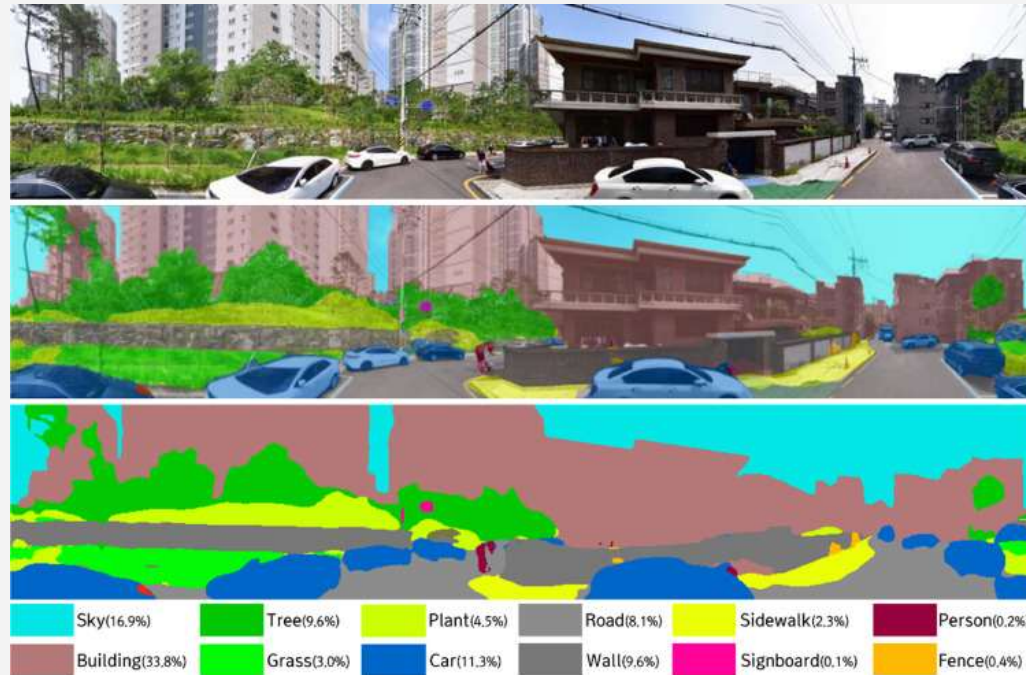


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COMPUTER VISION



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Objectdetectie

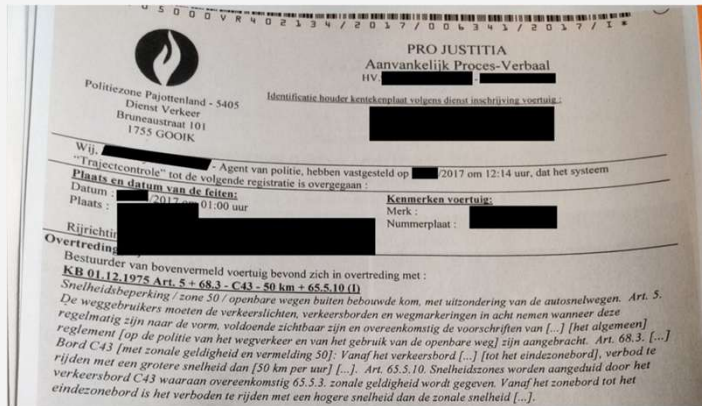



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NATURAL LANGUAGE PROCESSING



Analyse van politierapporten

Analyse van meldingen van burgers

Beschrijf uw melding

Waar gaat het om?

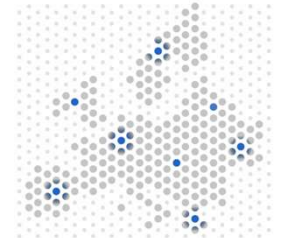
Er vaart een boot te hard met harde muziek

Hoofdrubriek

- overlast-op-het-water 100%

Subrubriek

- overlast-op-het-water-geluid 55%
- overlast-op-het-water-snel-varen 44%



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CRIME SCRIPTING



1. Import



2. Uithalen



3. Opslag



4. Tussenhandel



5. Bewerken



6. Consumentenverkoop

Via zeehavens

Container

MO1.1: Constructiemethode/inbouwen in een container

MO2.1: Openbreken van container-constructie

MO1.2: Rip-off-methode in container

MO2.2: Pakketten cocaïne (in sport-tassen) uit container halen

MO1.3: Rip-off-methode in koelunit van de container

MO2.3: Pakketten cocaïne uit koelunit halen

MO1.4: Switch-methode

MO2.4: Overladen naar Europese container

Lading

MO1.5: Tussen deklading

MO2.5: Pakketten cocaïne uit de lading halen

MO1.6: Lading voor particulieren

MO2.6: Cocaïne uit het product halen of extraheren (wassen)

MO1.7: Groepagecontainers

MO1.8: Verwerkt of weggewerkt

Schip

MO1.9: Droppingmethode

MO2.7: Ophalen op afgesproken plek in het water

MO1.11: Aan het schip-methode

MO2.8: Aflopen

MO1.12: Afloopmethode

MO3.1: Tijdelijke/mobiele opslag

MO3.2: Opslag in safehouse (bijv. loodsen, garageboxen en appartementen)

MO4.1: Handel via bevriende of familiale contacten

MO4.2: Handel op fysieke ontmoetings- of handelsplaatsen

MO4.3: Onlinehandel (bijv. via dark-web)

Omzetten

MO5.1: Geïmporteerde cocapasta omzetten naar cocaïne-hydrochloride (snuifcokes)

MO5.2: Snuifcokes omzetten in rookbare basecokes

Versnijden

MO5.3: Versnijden met het middel levamisol (ontwormingsmiddel)

MO5.4: Versnijden met het middel fenacetine (aan paracetamol verwante pijnstiller)

Verpakken

MO5.5: Blokken persen en bestempelen

MO5.6: Basecokes verpakken in bolletjes van 0,2 gram

Snuifcircuit

MO6.1: Verkoop vanuit dealpanden

MO6.2: Verkoop op bestelling via telefooncentrale

MO6.3: Verkoop op bestelling via digitale marktplaatsen en levering per post

Versnijden

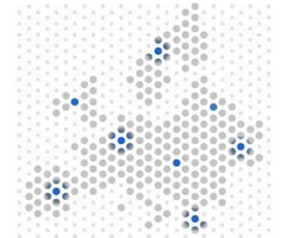
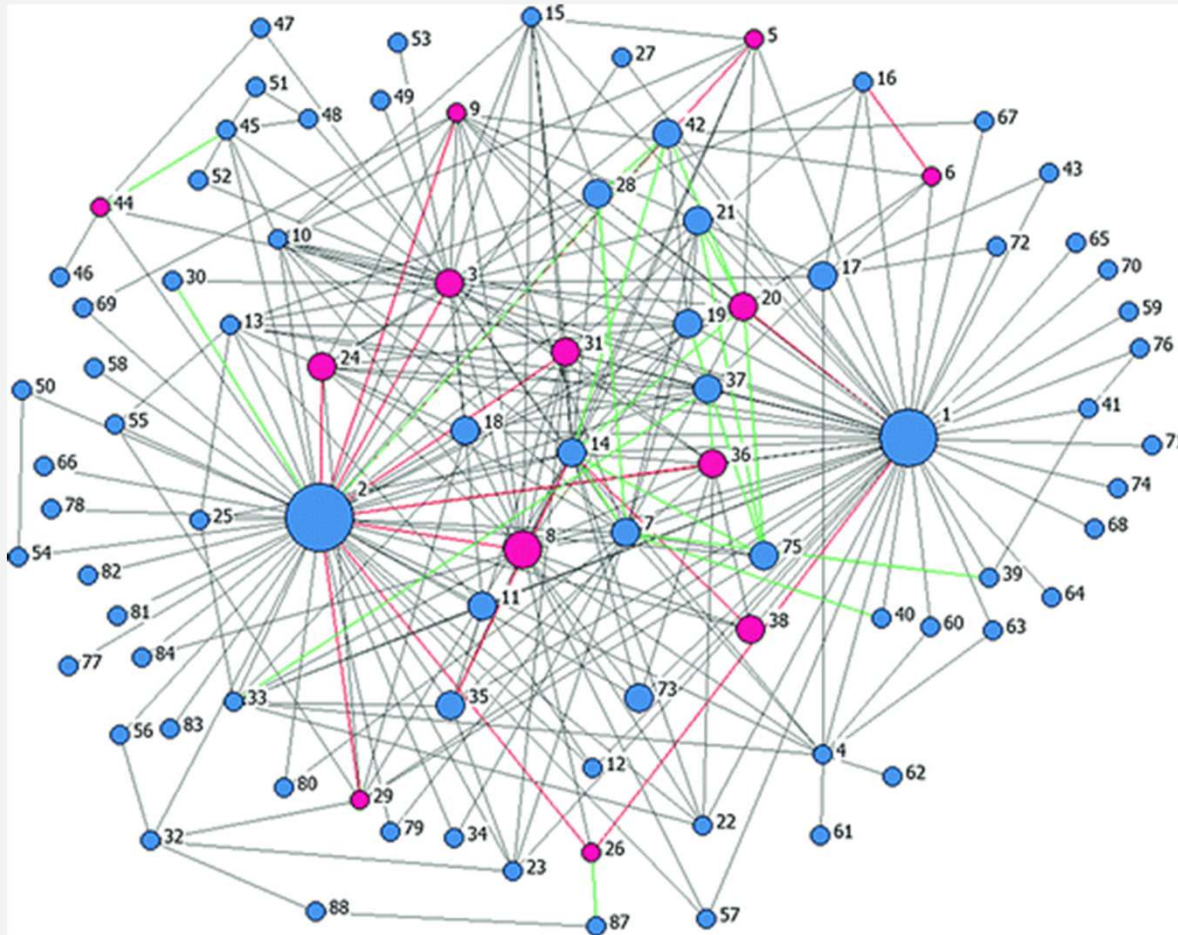
MO6.4: Verkoop op openbare plaatsen

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Commissie

SOCIALE NETWERKANALYSE



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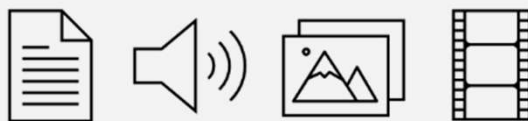
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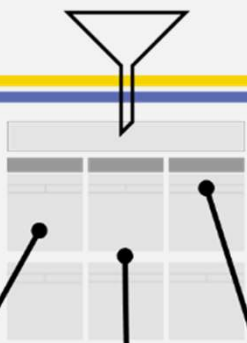
CONNECTING THE DOTS

Collect



- Text (natural language processing)
- Audio (audio mining)
- Images and video (computer vision)

Store

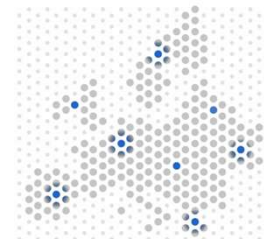


- Crime scripting

Analyze



- Social network analysis
- Agent-based modelling
- Spatiotemporal modelling



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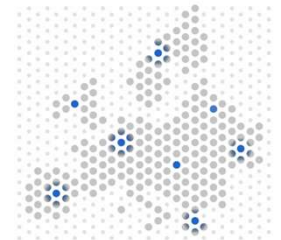
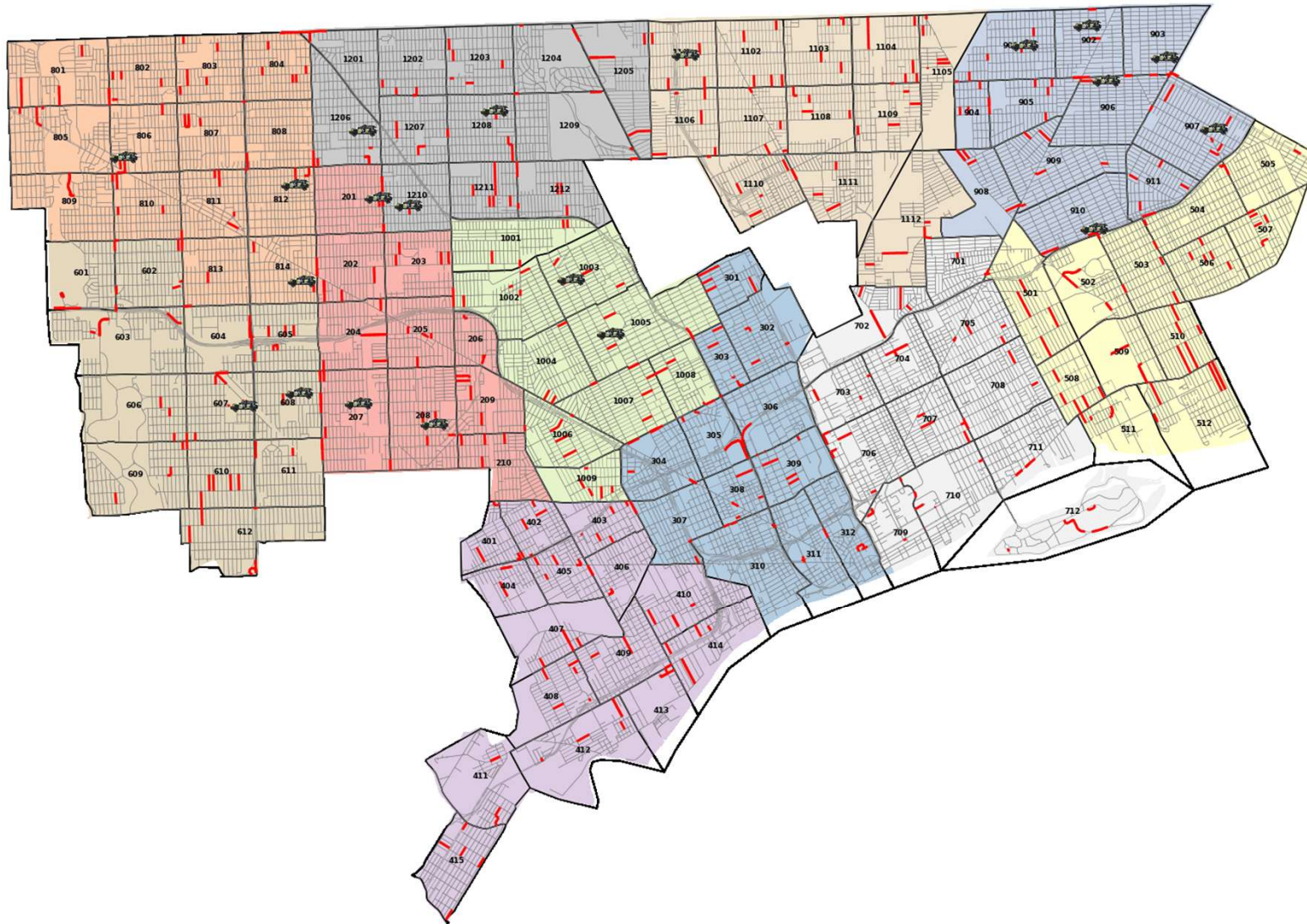


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2019-03-19 08:00:00



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DE TOEKOMST

The background is a blue-tinted image of a city skyline, likely New York City, with various skyscrapers visible. Overlaid on this is a white network diagram consisting of lines, circles, and arrows, suggesting a digital or technological theme.

4

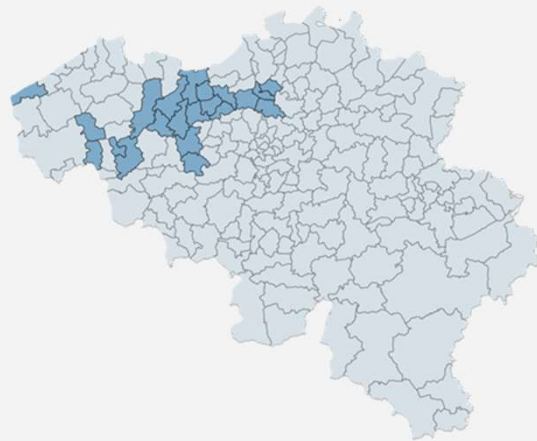
Komende veldtesten

2025

-

2026

Veldtesten in 20 Belgische politiezones

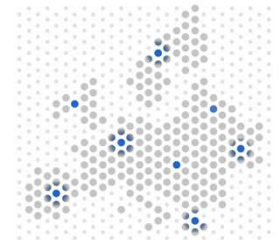


2025

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2028

Veldtesten in Europese steden



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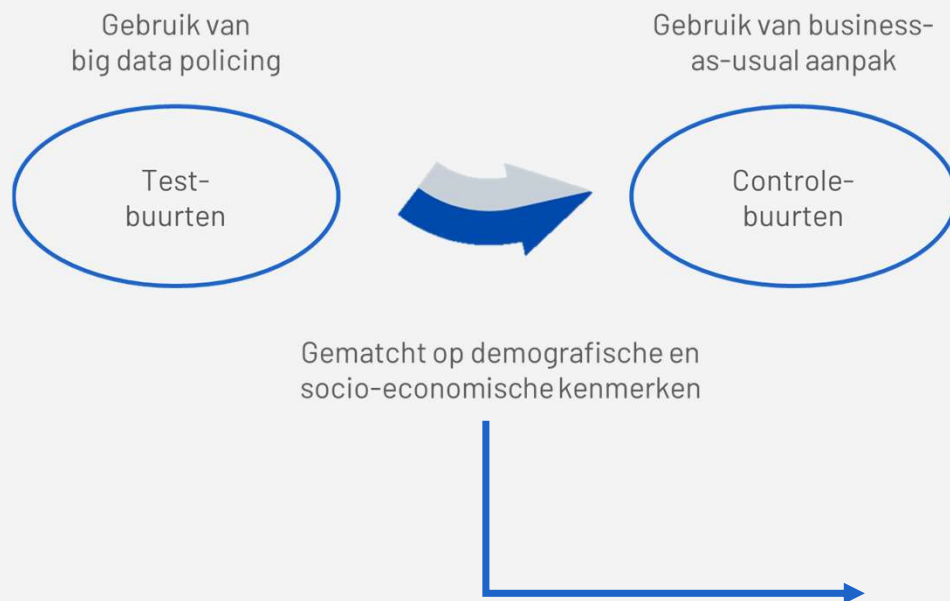


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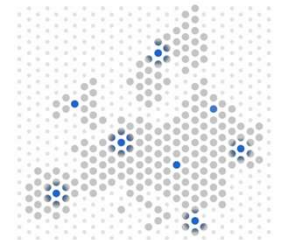


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Experimentele veldtesten



- Evaluatie prestaties ML-modellen
- Evaluatie politiecapaciteit, afschrikking en criminaliteitsreductie
- Evaluatie gebruikerservaringen
- Evaluatie kosten-baten
- Evaluatie ethische en juridische aspecten



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Maarten Sukel (in Renzenbrink, 2019):

“Als een algoritme seksistisch of racistisch blijkt te zijn, wordt vaak de schuld bij de techniek gelegd. Maar als een model dat doet op basis van oude data, dan is het waarschijnlijk dat die problemen er al waren. Die leg je bloot als je er een algoritme voor maakt. Het is zonde om dan te besluiten de techniek niet te gebruiken. Daarmee gooi je een potentieel hulpmiddel weg. Het is een signaal om te zeggen: we moeten dit anders gaan doen.”

Garbage in = garbage out



Wetenschappelijke en socio-economische **valorisatie**



i4S
Business Development
Center UGent

DOMEIN
SECURITY

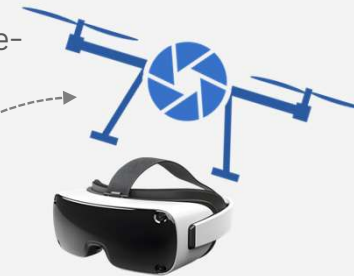
DOMEIN
CRIMINALITEIT

CLUSTER
TECHNOLOGIE

CLUSTER
DIGITALISERING

CLUSTER
PRIVACY

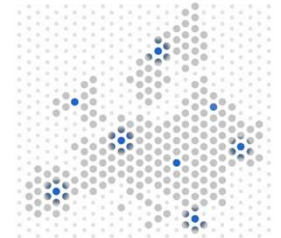
Datatechnologie-
bedrijven



IT-bedrijven



Privacy experts



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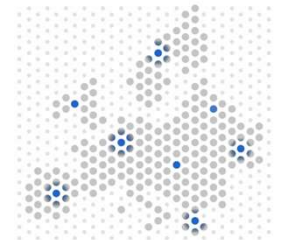
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- LinkedIn page BIGDATPOL



- Wim.Hardyns@UGent.be

- WWW.BIGDATPOL.COM



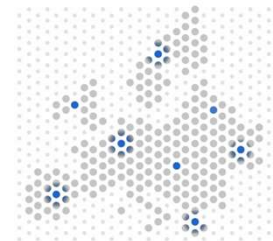
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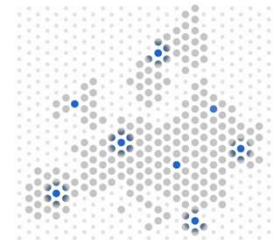
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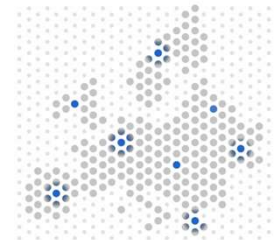
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