

# Bounded Automation

Bruchstellen und Beratungsspielräume  
in der algorithmischen Verwaltung

Maximilian Heimstädt

1. Februar, 2019  
gfa | public

**Grenzenlose Automatisierung?**

**Grenzüberschreitend: Algorithmen in NYC**

**Möglichkeiten der Grenzziehung**

# Grenzenlose Automatisierung?

W Cebit – Wikipedia

https://de.wikipedia.o Search

Nicht angemeldet Diskussionseite Beiträge Benutzerkonto erstellen Anmelden

Artikel Diskussion Lesen Bearbeiten Mehr Wikipedia durchsuchen

Koordinaten: 52° 19′ 37″ N, 9° 48′ 33″ O

# Cebit

Die **Cebit** (Akronym für *Centrum für Büroautomation, Informationstechnologie und Telekommunikation*, ursprünglich *Centrum der Büro- und Informationstechnik*; Eigenschreibweise **CEBIT**, bis 2017 **CeBIT**) war eine der weltweit größten Messen für Informationstechnik und fand von 1986 bis 2018 jährlich auf dem Messegelände Hannover statt. Veranstalter der Cebit war die Deutsche Messe AG.

<b>Cebit</b>	
<b>CEBIT</b> ®	
Branche	Informationstechnik
Ausstellungsort	Messegelände Hannover
Website	<a href="http://www.cebit.de">www.cebit.de</a>
<b>Letzte Ausstellung</b>	

**WIKIPEDIA**  
Die freie Enzyklopädie

Hauptseite  
Themenportale  
Zufälliger Artikel

Mitmachen  
Artikel verbessern  
Neuen Artikel anlegen  
Autorenportal  
Hilfe  
Letzte Änderungen

Fully Automated Luxury Communism (FALC)



ホテル



ご希望の項目を押して下さい

チェック  
イン

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中文

English

English

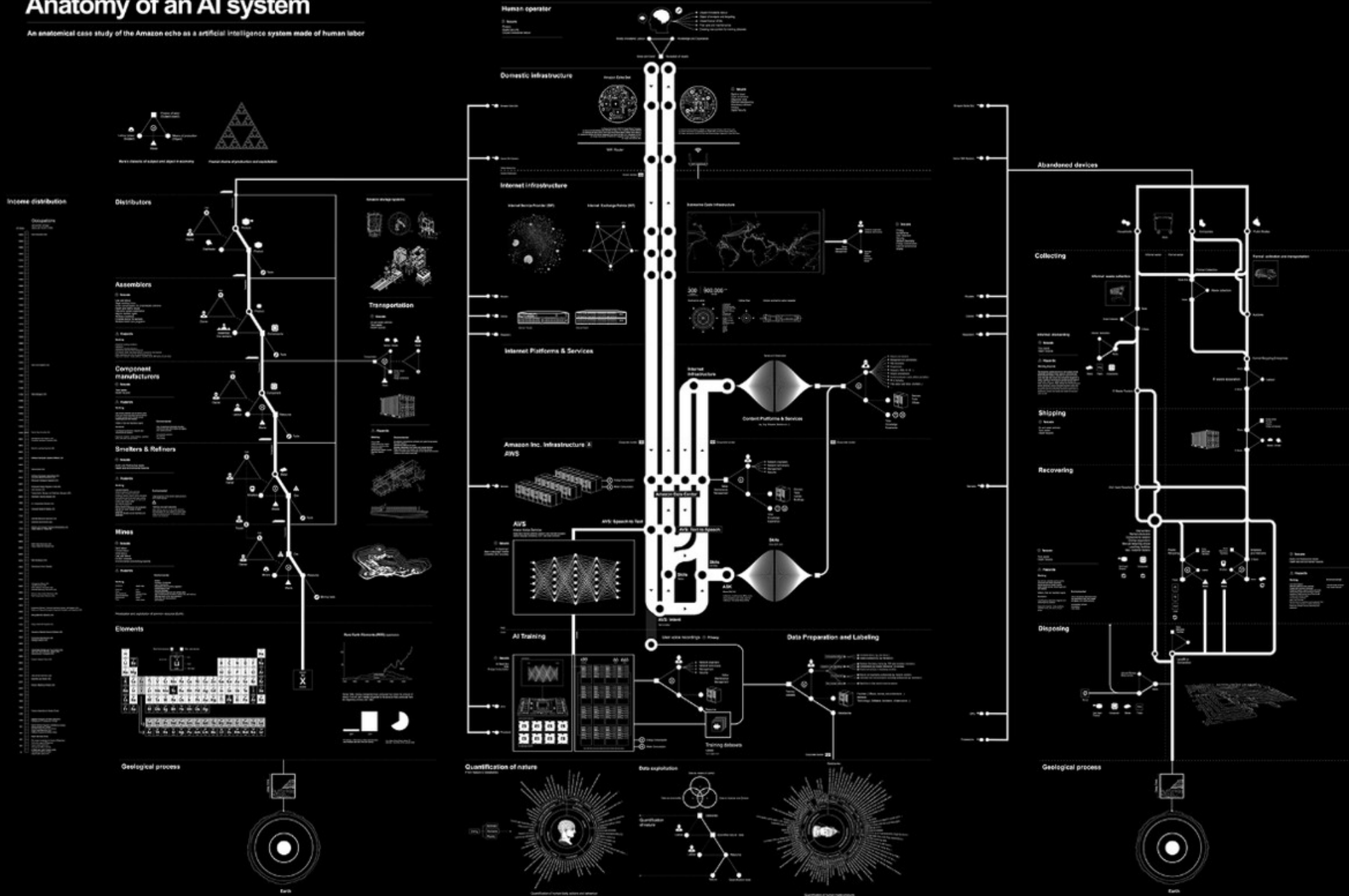


※必ずこの方向に、このマーク  
を向けてください。



# Anatomy of an AI system

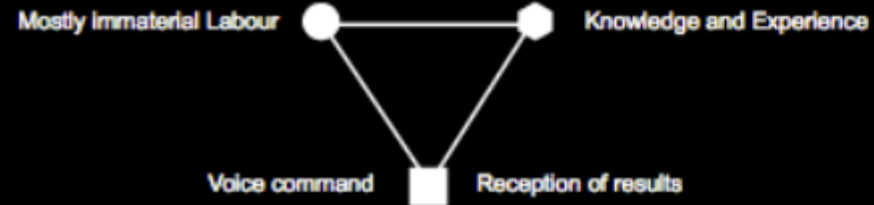
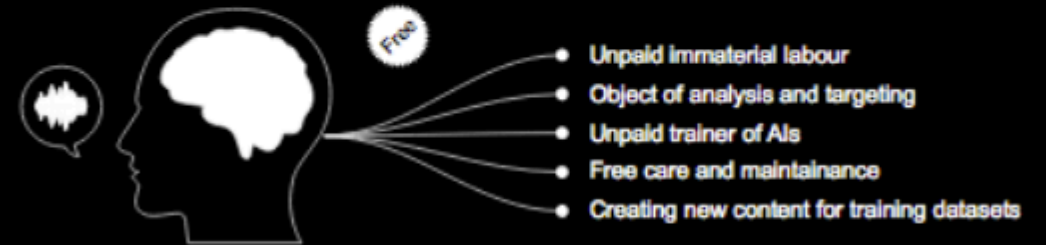
An anatomical case study of the Amazon echo as an artificial intelligence system made of human labor



# Human operator

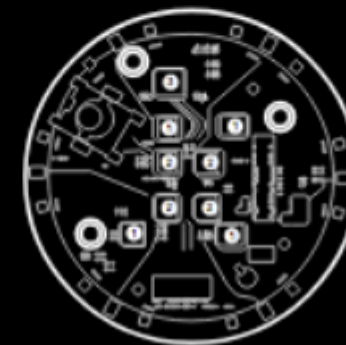
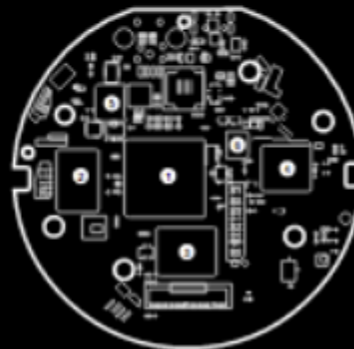
## Issues

- Privacy
- Digital security
- Unpaid Immaterial labour



# Domestic infrastructure

Amazon Echo Dot

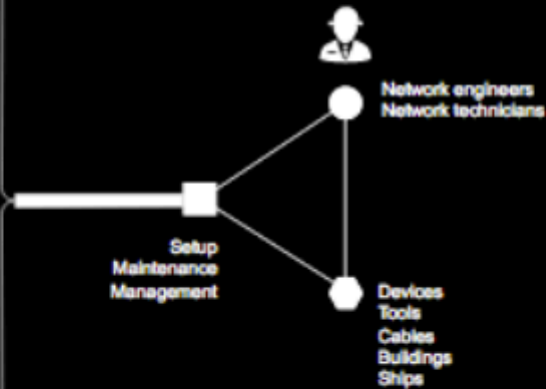
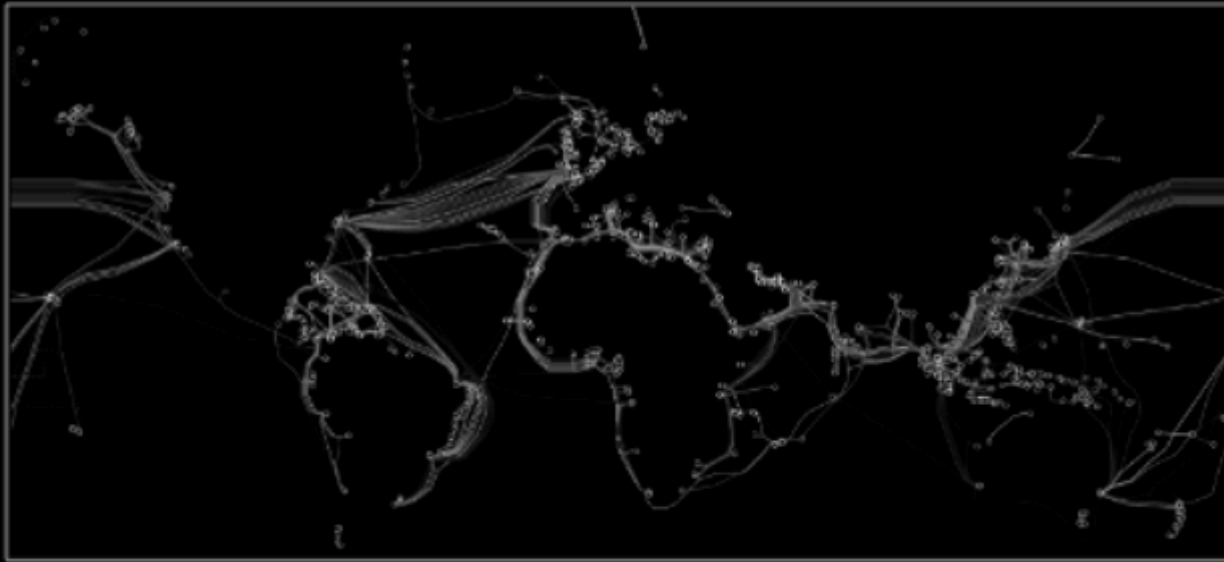


## Issues

- Right to repair
- Open schematics
- Diagnostic tools
- Planned obsolescence
- Proprietary software
- Privacy
- Digital Security



## Submarine Cable Infrastructure



### Issues

- Privacy
- Surveillance
- Data Retention
- Security
- Network Neutrality
- Energy Consumption
- Internet Governance
- Sharks

300 Submarine communication cables  
 900,000 Km Total length

Submarine cable



- (1) Polyethylene
- (2) Ripstop fabric
- (3) Braided steel wires
- (4) Aluminum water barrier
- (5) Polyurethane
- (6) Copper or aluminum tape
- (7) Polyester jelly
- (8) Optical fibers
- (9) Polymer of Ethyl Glycol
- Coating
- (10) Pure fused silica
- Cladding
- (11) Germanium Doped Silica Core
- Cladding 1
- Amplifier
- Polyester
- Aluminum
- Core

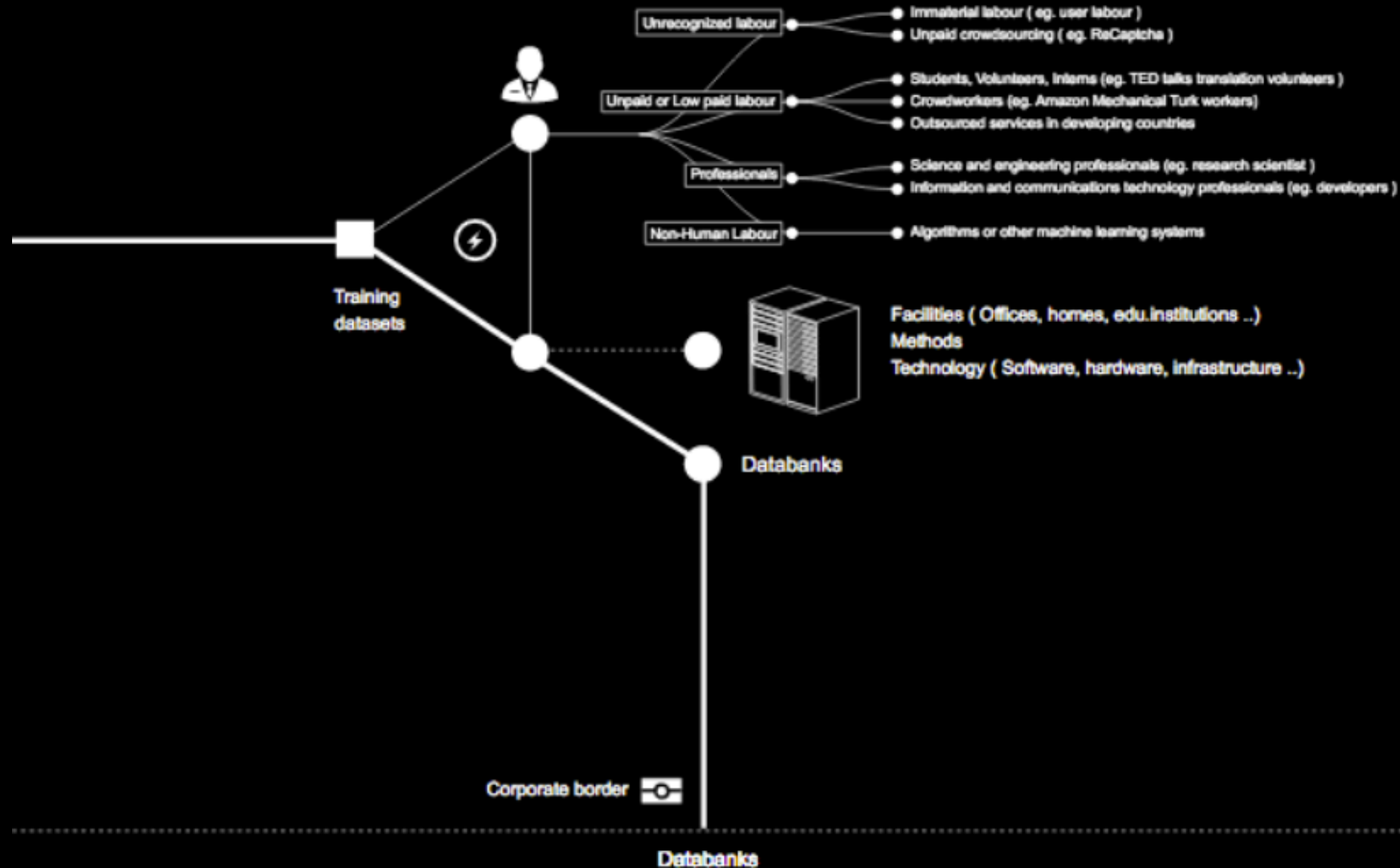
Optical fiber



Optical submarine cable repeater



# Data Preparation and Labeling





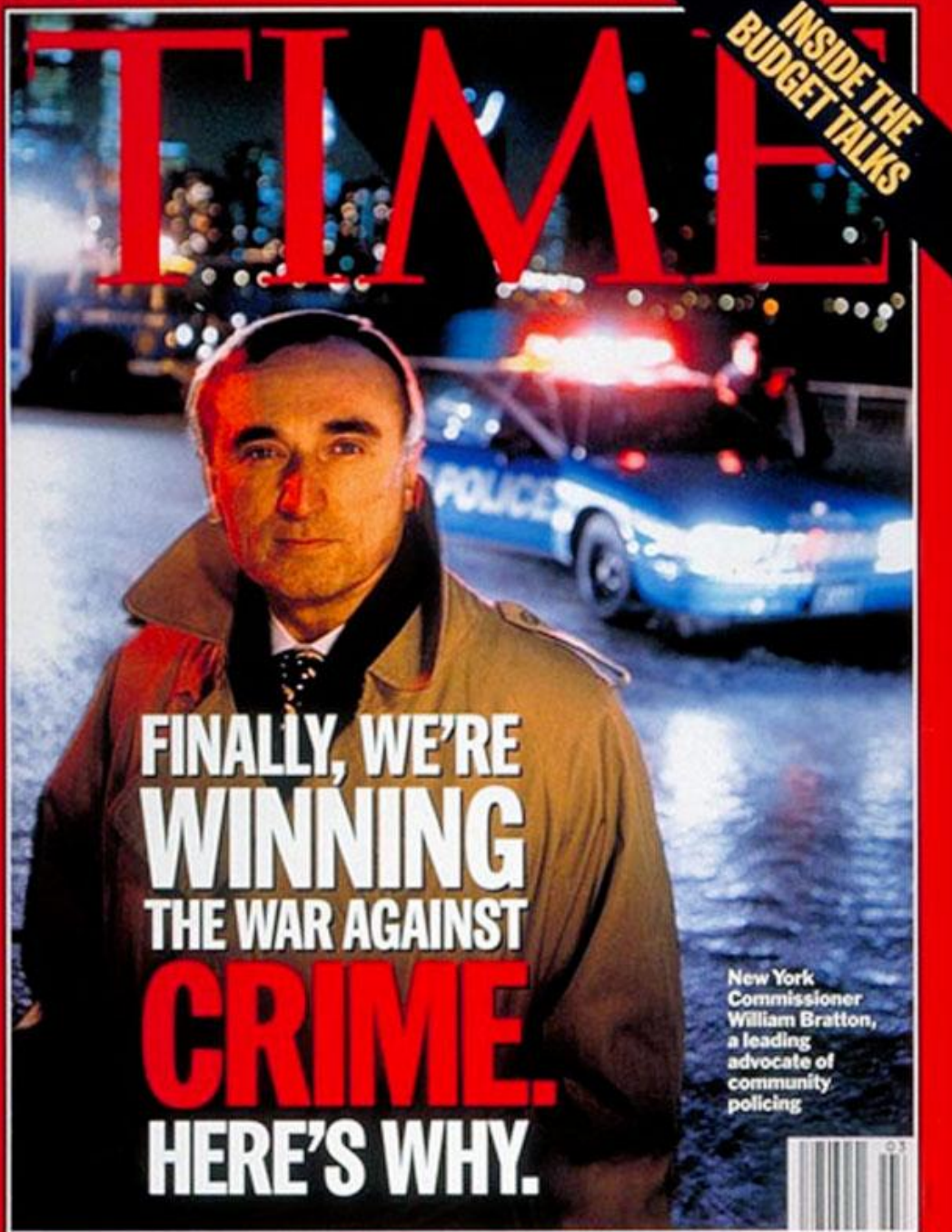
# Fauxtimation

Astra Taylor

# Grenzüberschreitend: Algorithmen in NYC



**1970er: FDNY und die RAND Formel**



## 1990er: NYPD und CompStat






**Heute: Schulplatzvergabe**


M How to game the NYC Algorithm X +

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# How to game the NYC Algorithm for Middle School

 Jeffrey Galusha [Follow](#)  
Apr 13, 2018 · 3 min read

In NYC, kids go to middle school tours and select their preferred schools. Since I have a 5th grader going into middle school (6th) we went on about 9 school tours. It was amazing. There are a ton of great public middle schools in Manhattan.

 Never miss a story from **Jeffrey Galusha**, when you sign up for Medium. [Learn more](#) [GET UPDATES](#)






**Heute: Gesundheitsversorgung**

Machine Bias — ProPublica

Pro Publica, Inc. (US) https://www

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*Bernard Parker, left, was rated high risk; Dylan Fugett was rated low risk. (Josh Ritchie for ProPublica)*

# Machine Bias

There's software used across the country to predict future criminals.  
And it's biased against blacks.

# Heute: Risiko-Scoring



**Heute: Kindesmisshandlung**

# Möglichkeiten der Grenzziehung




Automated Decision Systems Task Force

311 Search all NYC.gov websites

**NYC**  
Automated Decision  
Systems Task Force

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**New York City Automated Decision Systems Task Force ▶**

**LEARN MORE**

The ADS Task Force will review how the City uses algorithms through a lens of fairness and equity for all New Yorkers.

# **Möglichkeit 1: Umfassende Transparenz**



**Public Money**

**Public Code**

[fsfe.org](https://fsfe.org)

## **Möglichkeit 2: Qualifizierte Transparenz**



**Wer oder was ist qualifiziert?**



ACM FAT\* Conference 2019 2018 Organization Resources

# ACM Conference on Fairness, Accountability, and Transparency (ACM FAT\*)

A multi-disciplinary conference that brings together researchers and practitioners interested in fairness, accountability, and transparency in socio-technical systems.

Livestreams of the ACM FAT\* conference are available [here](#) from January 29-31, 2019. See the [program](#) for a detailed schedule

# AINOW 2018 SYMPOSIUM

ETHICS, ORGANIZING, AND ACCOUNTABILITY



AINOW









MANHATTAN







# This logo is like an “organic” sticker for algorithms

The food we eat has quality certifications. Why shouldn't the algorithms that shape our world?



[Image: Katie Falkenberg/courtesy ORCAA]



## **The Rentlogic Grading algorithm was audited by ORCAA in January 2018.**

ORCAA's audit examined Rentlogic's algorithmic design, implementation, execution, and issued list of suggestions to sustain and improve quality control. ORCAA also ran a comprehensive study of the algorithm's ethical consequences in multiple dimensions and for the various stakeholders.

ORCAA hereby certifies Rentlogic's algorithm as accurate, consistent, unbiased, transparent, fair, and timely. For a detailed description of ORCAA's certification process, see [oneilrisk.com](http://oneilrisk.com).

A handwritten signature in black ink that reads "Cathy O'Neil".

Cathy O'Neil  
President & CEO, ORCAA



# Diskussionsimpulse

## **Lieber nicht:**

- „Welche Entscheidungen lassen sich am leichtesten automatisieren?“

## **Sondern besser:**

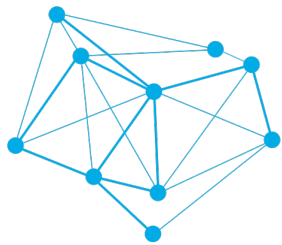
- „Welche Entscheidungen sind am anfälligsten für menschliche Fehler?“
- „Wo trifft die Abwesenheit von Ausnahmen am schwersten?“

## **Aber auch:**

- Wie kann die algorithmische auch eine lernende Organisation sein?



# Zum Thema Digitalisierung empfehle ich:



**D64**

Zentrum für  
Digitalen Fortschritt

... für soziale Digitalpolitik



ALGORITHM  
WATCH

... für Algorithmenbeobachtung



OPEN  
KNOWLEDGE  
FOUNDATION  
DEUTSCHLAND

... für Offenheit als Digitalprinzip

# Shownotes

<https://www.theguardian.com/sustainable-business/2015/mar/18/fully-automated-luxury-communism-robots-employment>

<https://www.theverge.com/2019/1/15/18184198/japans-robot-hotel-lay-off-work-for-humans>

<https://anatomyof.ai/>

<https://logicmag.io/05-the-automation-charade/>

<https://fivethirtyeight.com/features/why-the-bronx-really-burned/>

<https://umusama2015.files.wordpress.com/2015/04/time-magazine-nyc-compstat.jpg>

<http://nymag.com/intelligencer/2018/03/the-crime-fighting-program-that-changed-new-york-forever.html>

<https://thenewinquiry.com/a-predictive-policing-syllabus/>

<https://www.nytimes.com/2018/06/17/nyregion/public-schools-screening-admission.html>

<https://www.theverge.com/2018/3/21/17144260/healthcare-medicaid-algorithm-arkansas-cerebral-palsy>

<https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>

<http://knowledge.wharton.upenn.edu/article/how-algorithms-worsen-inequality/>

<https://www.fastcompany.com/90172734/this-logo-is-like-an-organic-sticker-for-algorithms-that-arent-evil>

<https://medium.com/@AINowInstitute/ai-in-2018-a-year-in-review-8b161ead2b4e>

# Herzlichen Dank

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