- Will AI take over the world?
- How to navigate a career in CS without losing your job to AI.
- Implications of the lack of AI regulation
- Career opportunities in computer science

Will AI take over the world?

Lets play a game. Each of these statements I will read were either said in the 1950s, 1980s or 2020s. I'll read you a statement, you tell me when it was said.

1957: *there are now [...] machines that think, that learn and create. [...] their ability to do these things is going to increase rapidly until [...] the range of problems they can handle will be coextensive with the range to which the human mind has been applied.*

-Herbert Simon

2024*: There is no question that AI will eventually reach and surpass human intelligence in all domains.*

-Yann LeCun

1958: The Perceptron will result in machines that "will be able to walk, talk, see, write, reproduce itself and be conscious of its existence."

-New York Times

1984: *AI: It's Here [...] Its now possible to program human knowledge and experience into a computer … Artificial intelligence has finally come of age.*

–Business Week

What is AI?
Well, these examples are meant to show you that we have been having exactly the same conversation for almost a hundred years.

I have a PhD from the Stanford Artificial Intelligence Lab, and I can't really tell you what AI is. That is because **AI is a marketing term whose meaning changes when there are what we call AI summers**, epochs where every other news headline seems to be about AI and there is ample funding for the field, and AI winters which come from the disappointment by undelivered overpromises during the AI summers.

We are currently in perhaps the longest and most intense AI summer, where just the mere mention of "AI" gets startups 15%-50% more funds in investments. Given that you are almost guaranteed to get more money by purely claiming to do so-called "AI," some companies even hired workers to pretend to be chatbots while claiming that their products are "AI powered," so that they can raise more venture capital funding. There was one recent incident where the CEO was sentenced to 40 years for doing that.

Forbes

Nearly Half Of All 'AI Startups' Are Cashing In On Hype

By Parmy Olson, Former Staff. AI, robotics and the digital transformation of European business.

Published Mar 04, 2019, 07:10pm EST, Updated Mar 05, 2019, 12:04pm EST

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This article is more than 6 years old.

Some 40% of firms across Europe classified as being "AI startups" showed no evidence that they used ... More

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FORBES' FEATURED VIDEO

ADV

Because AI is a marketing term, people use it to mean any number of things. So the first thing I want to explain to you is that whenever someone comes to you and tells you that if you sprinkle some AI magic the world's problems are going to go away, ask them what exactly they mean by AI.

In the 1950s, precursors to today's **neural networks** were synonymous with AI. How many of you have heard of **"neural networks"**?

But then these systems fell out of favor when they didn't deliver on the hype, so they were no longer called "AI."

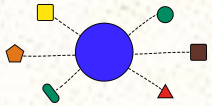
In the 1980s what are called **"expert systems**" were synonymous with AI while the people called "the godfathers of AI" today were complaining that no one cared about the stuff they were working on. You might have heard the term **"machine learning"** which today is interchangeably used with the term AI. Back in the 80s no one called **"machine learning"** AI.

My specialty is called **computer vision**. Unfortunately, computer vision happens to be the field fueling the worst forms of surveillance around the world, from warfare to over policing. I'll get to that later. But I never called myself an "AI researcher" because I was in the field during the AI winter. What happens after the AI summers is that the hype doesn't deliver and the term AI becomes associated with grandiose undelivered promises. So then all the people working in the various subsets of the field make sure that they dissociate themselves from "AI." We say no no no I'm not like those AI people who make ridiculous claims and don't deliver. I work in "machine learning." No I'm not AI. I work in computer vision. Don't bucket me with THOSE people!! But then when the AI summer comes and we see the funding and we're like yes yes I certainly AM an AI researcher. No I'm not a statistician. I do AI. No I'm not just a computer vision person (that's me). I **do Artificial Intelligence!**

Today, what is synonymous with AI is a whole jumble of things that can be very different from each other. But when the press says “AI” it usually is so-called generative AI, powered by what are called **large language models**. Large language models are the heart of systems like **ChatGPT** that have made AI a household topic.

In 2020, I was fired from Google for writing about the dangers of large language models.

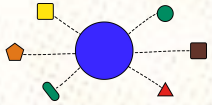
Reality



Open AI's Whisper Model Hallucination

Input: "He, the boy, was going to, I'm not sure exactly, take the umbrella"

Transcription:"He took a big piece of a cross, a teeny, small piece.... I'm sure he didn't have a terror knife so he killed a number of people."



OpenAI's transcription tool hallucinates more than any other, experts say—but hospitals keep using it

BY GARANCE BURKE, HILKE SCHELLMANN AND THE ASSOCIATED PRESS

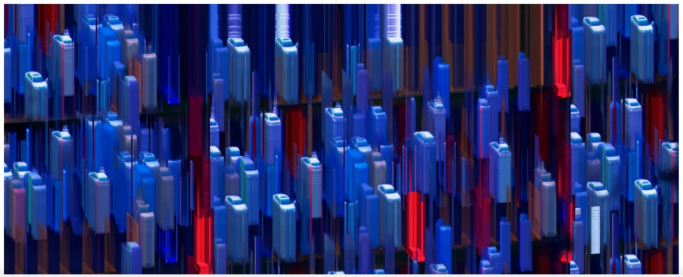
October 26, 2024 at 11:12 AM EDT

HUNIKI

My PhD thesis in the press

Google Street View's Window into How Americans Vote (Look at the Cars)

Instead of people, machines will paint the more accurate picture of how people think, live, and spend.



HOME · EMERGING TECH · NEWS

A.I. predicts how you vote by looking at where you live on Google Street View

By Luke Dormehl Published December 1, 2017

Save

Google Maps' Street View feature is a great way to explore the world around you, but could it be revealing more about your neighborhood than you think? That's quite possible, suggests new research coming out of Stanford University. Computer science researchers there have been demonstrated how deep learning artificial intelligence can scour the images on Google Street View and draw conclusions

The New York Times

How Do You Vote? 50 Million Google Images Give a Clue

The Economist

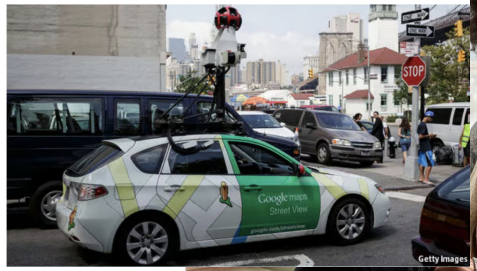
Weekly edition | The world in brief | War in the Middle East | War in Ukraine | United States | The world economy | Bu

Science & technology | Neighbourhood watch

A machine-learning census of America's cities

Millions of images of public streets offer a cheap, sweeping view of America's demography

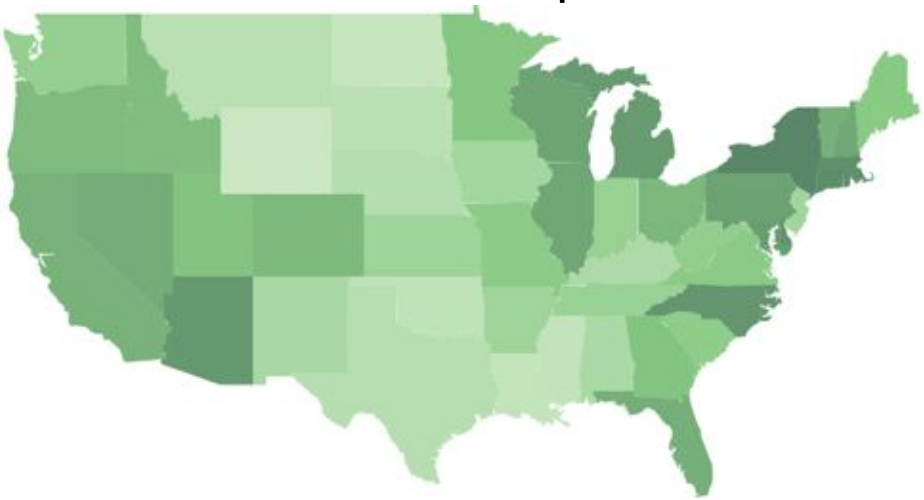
Share



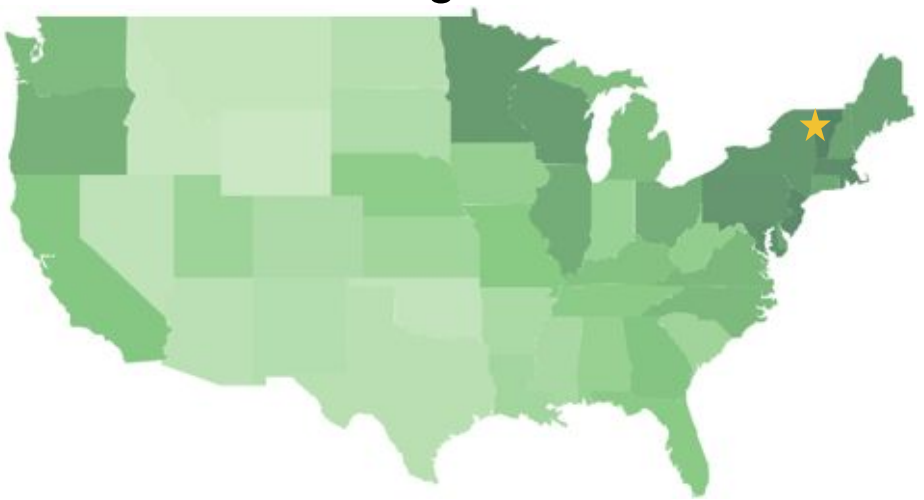
Timnit Gebru led the research effort at Stanford University that analyzed 50 million images and location data from Google Street View, the street-scene feature of the online giant's mapping service. Cody O'Loughlin for The New York Times

highest MPG:
Burlington, VT

Carbon Footprint



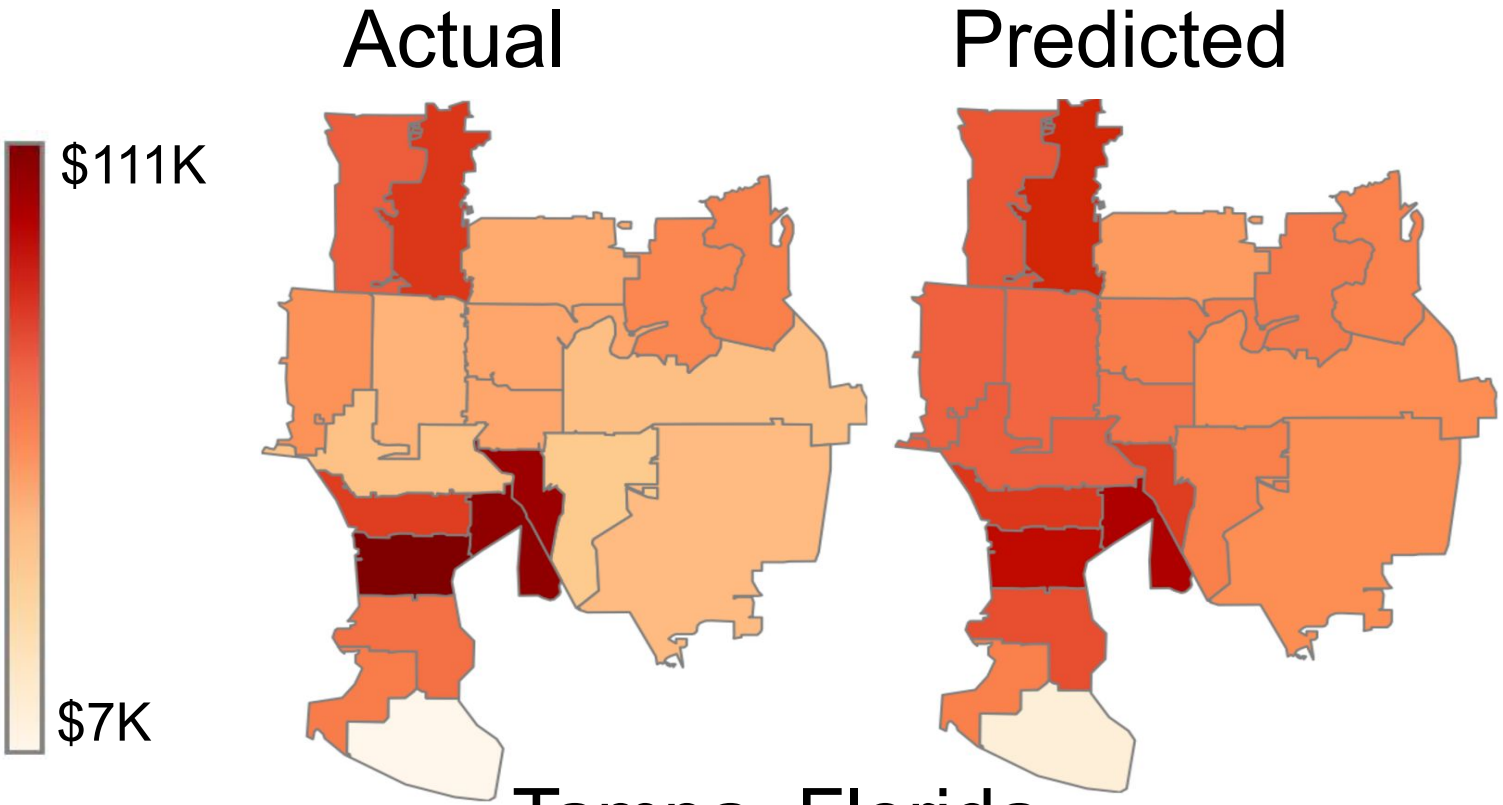
Average MPG



least green — most green

Gebru et al. AAAI 2017

Results



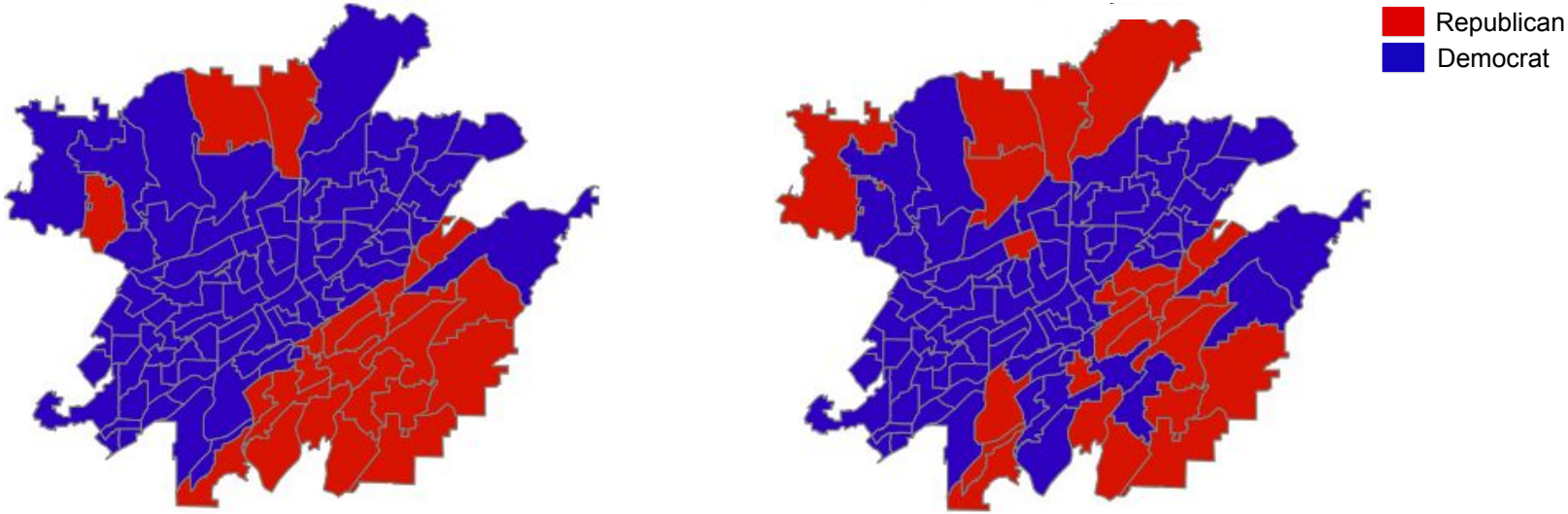
Tampa, Florida

Gebru et al. PNAS 2017

Results

Actual

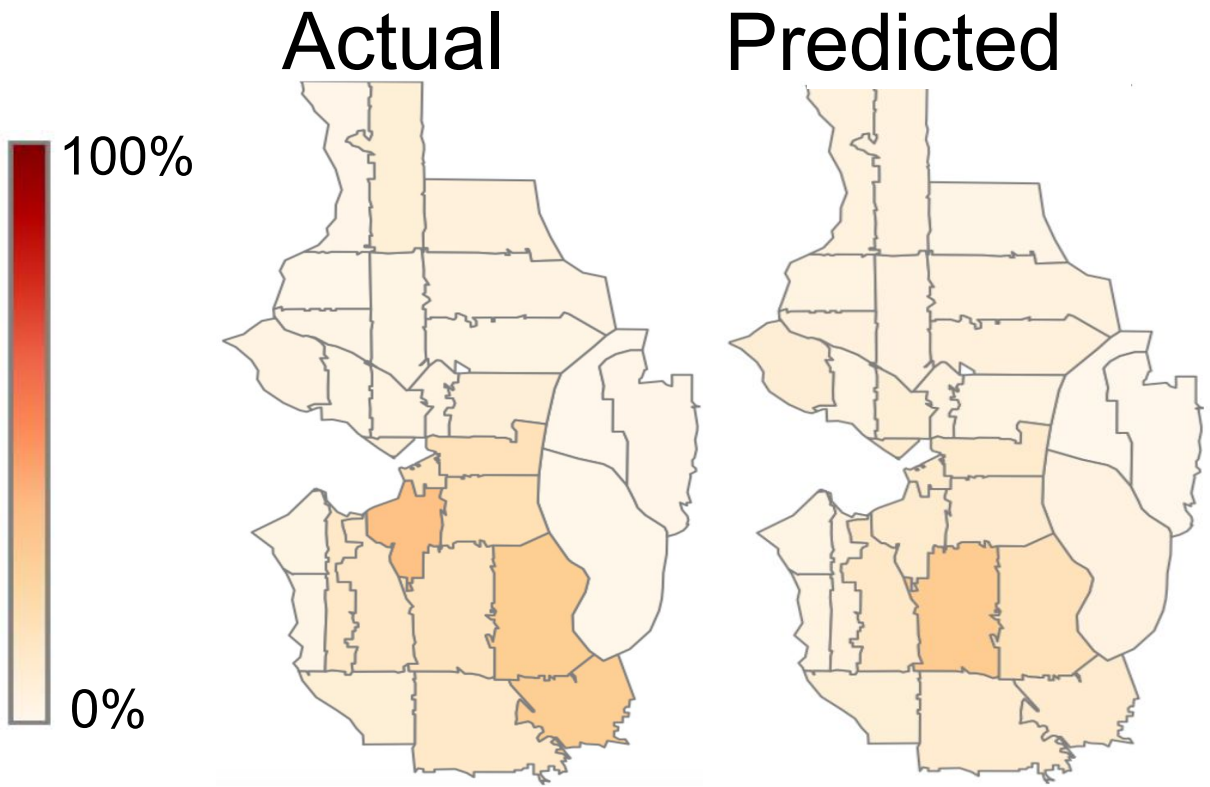
Predicted



Birmingham, Alabama

Gebru et al. PNAS 2017

Results (%Black)



Seattle, Washington

Gebru et al. PNAS 2017

Reading “AI predicts how you vote by looking at where you live,” do you think that the machines might one day take over?

Reality.

A source of data: Google Street View

2008 Toyota Prius

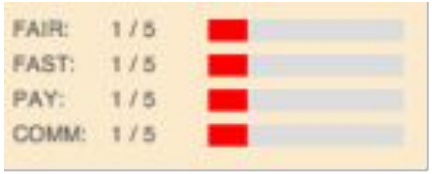
2008
Toyota (Japanese)
Hatchback
$9,542
45 MPG (highway)
48 MPG (city)
Hybrid

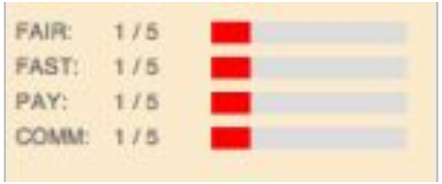
Grouping Classes Together

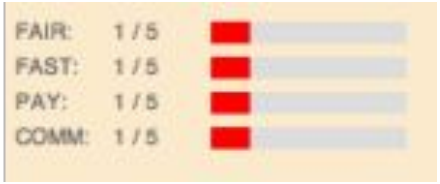
2,657 classes since 1990

Timnit-sourcing

We got terrible reviews on AMT

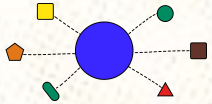






“apparently the virtually indistinguishable cars are super distinguishable to them”

“I paid very close attention to the pictures and let the requester know that I feel these rejects were unfair. Will update when I get communication back.”



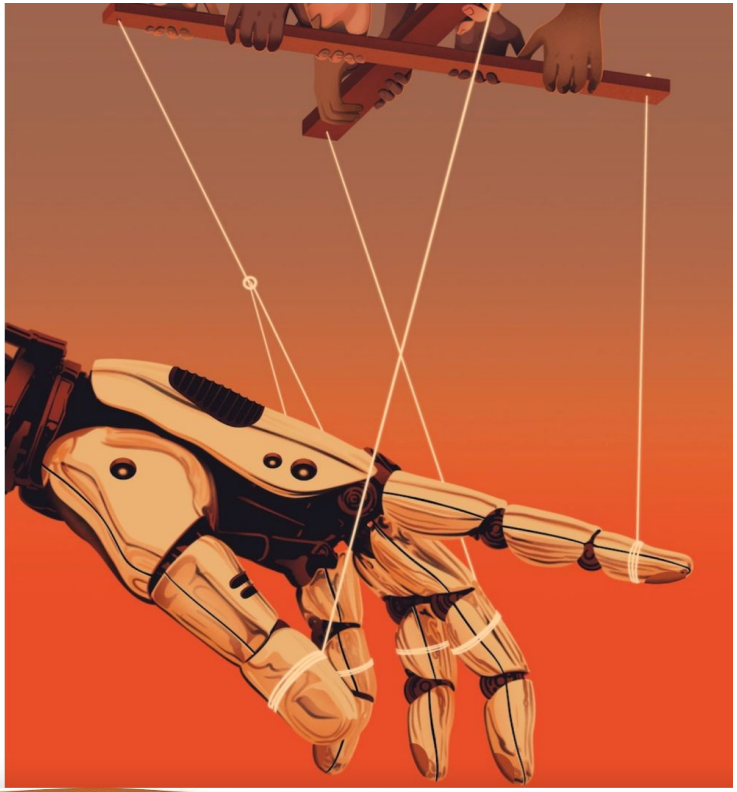
Take a look at the repositories at https://data-workers.org/.

E.g., watch Yasser's 8 minute video on the life of a Syrian data workers.

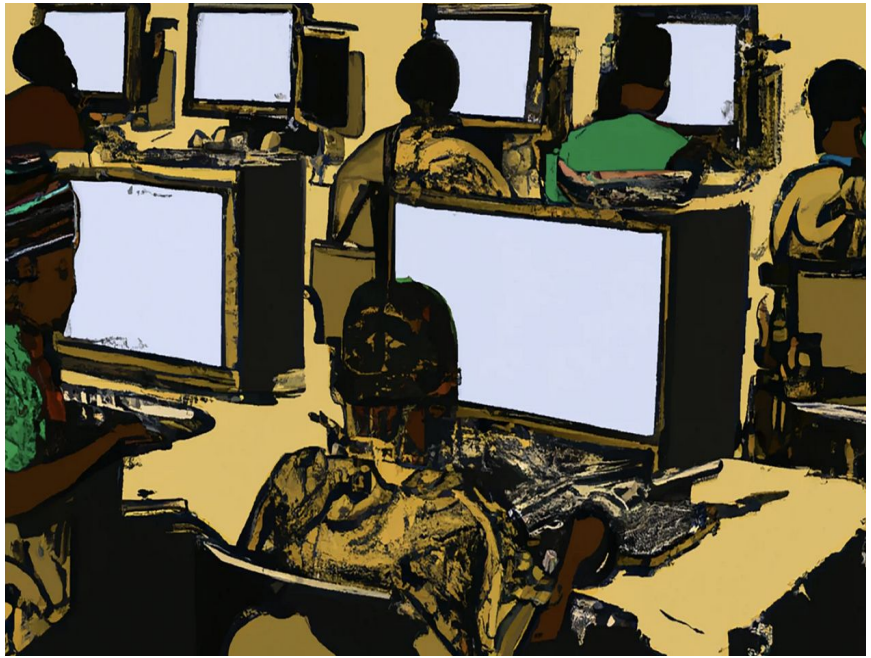
https://www.noemamag.com/the-exploited-labor-behind-artificial-intelligence/

The Exploited Labor Behind Artificial Intelligence

Supporting transnational worker organizing should be at the center of the fight for “ethical AI.”



Exclusive: OpenAI Used Kenyan Workers on Less Than $2 Per Hour to Make ChatGPT Less Toxic

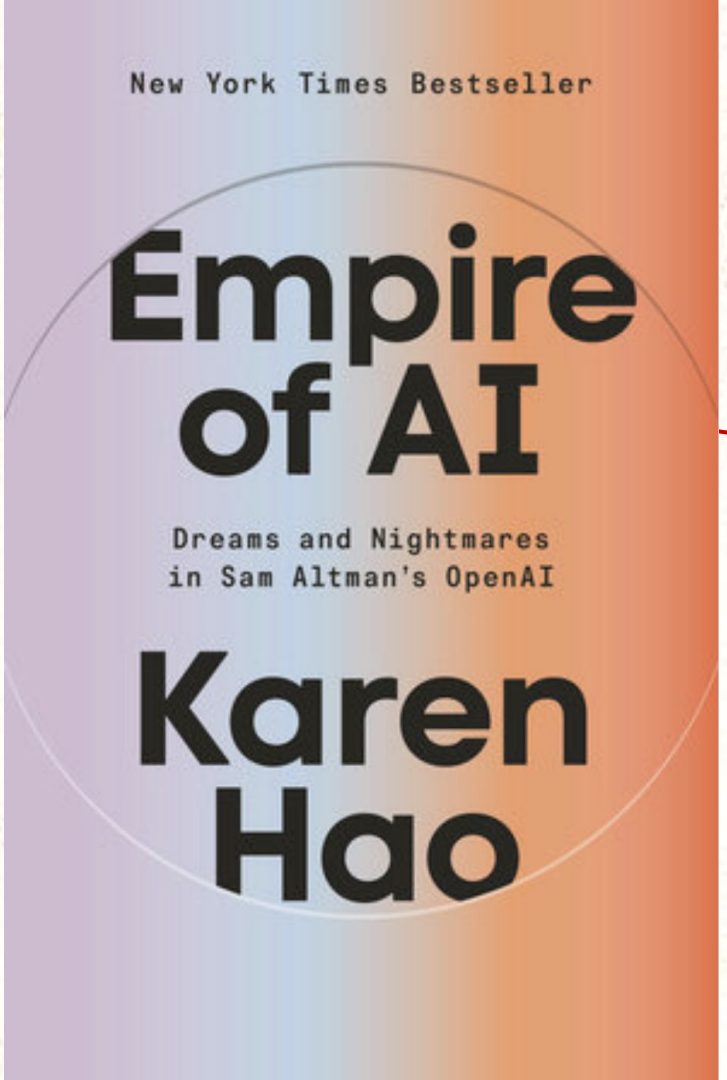


Billy Perrigio
TIME Magazine
https://time.com/6247678/openai-chatgpt-kenya-workers/

Knowing the reality, do you think the machines will take over?

Who benefits from the narrative that AI will one day take over and that we are close to that time?

Massive scale **data and intellectual property theft & worker exploitation** make AI look like it might take over.



Book Recommendation

Empire of AI: Dreams and Nightmares in Sam Altman's OpenAI

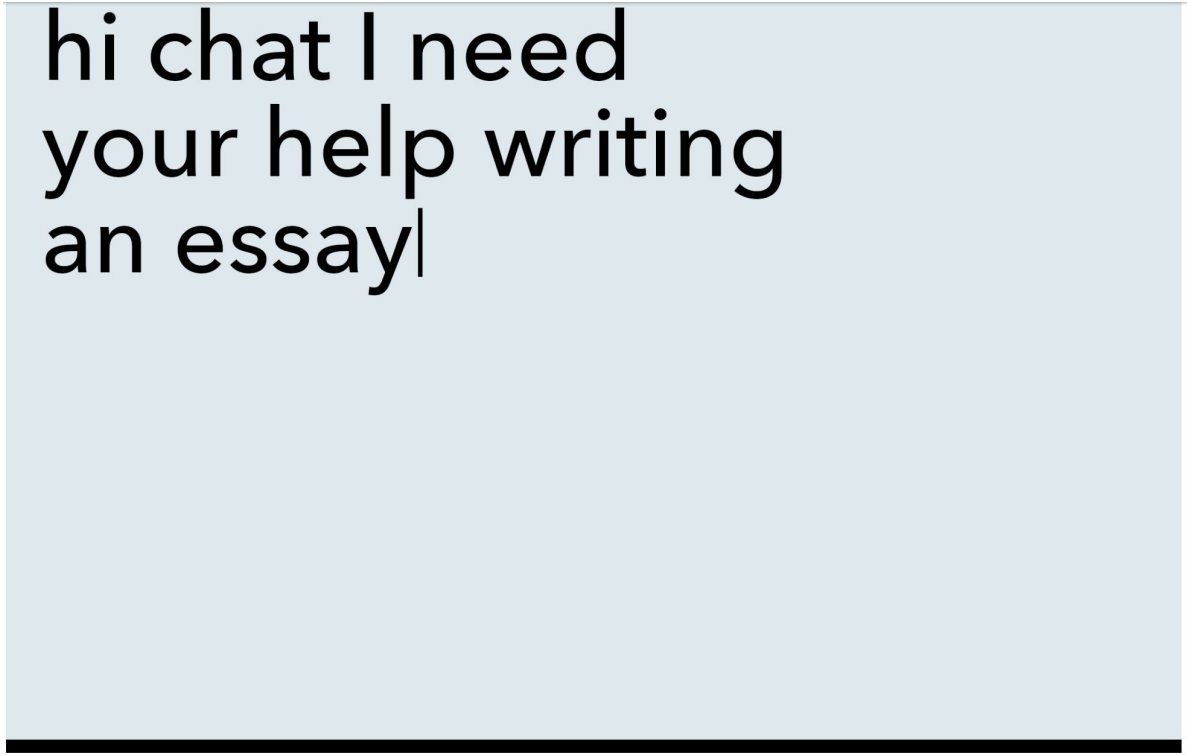
- Will AI take over the world?
- **How to navigate a career in CS without losing your job to AI.**
- Implications of the lack of AI regulation
- Career opportunities in computer science
- Social media algorithms and media censorship

How to navigate a career in CS without losing your job to AI.

Know the fundamentals, whatever you do. Don’t skip over the foundational things you need to learn, and don’t try to take shortcuts.

If OpenAI is telling you that you don’t have to learn anything and that you can just use ChatGPT, what do you think they’re telling your prospective employers?

https://nymag.com/intelligencer/article/openai-chatgpt-ai-cheating-education-college-students-school.html



HIGHER EDUCATION

Everyone Is Cheating Their Way Through College ChatGPT has unraveled the entire academic project.

r/programming • 10 mo. ago
bizzehdee

Why Copilot is Making Programmers Worse at Programming

https://www.reddit.com/r/programming/comments/1feb9qd/why_copilot_is_making_programmers_worse_at/

Regardless of whatever you do, writing is an invaluable skill. That is what I spend most of my time doing right now. It’s not about putting words on paper, it's about critical thinking, structure, understanding how to extract the big picture, etc.

Anything you spend time to learn without shortcuts is making you more and more irreplaceable. Anything you try to take a shortcut to is making you more replaceable. Hone your critical thinking skills, don’t outsource them.

- Will AI take over the world?
- How to navigate a career in CS without losing your job to AI.
- **Implications of the lack of AI regulation**
- Career opportunities in computer science
- Social media algorithms and media censorship

Implications of the lack of AI regulation

A Case Study of Some of My Works

All of a sudden, I realized that it was bankers and insurance professionals who were most interested in my work.

GOOGLE MAPS

Tech Policy / Privacy

How a Google Street View image of your house predicts your risk of a car accident

Ad closed by Google
Stop seeing this ad
Why this ad?

What are the incentives of

-Insurance companies?

-Banks?

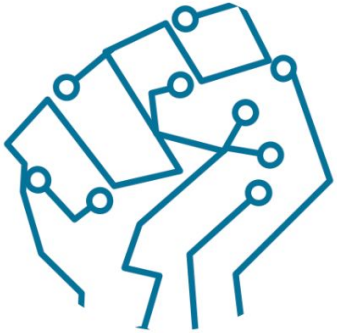
-Graduate Students like me?

-Advisors like my PhD advisor?

-Stanford as university?

If I’m uncomfortable with my research direction as a grad student, what actions could I take? What can I do to try and change my field?

I founded Black in AI.



Black in AI

Black in AI (BAI)

Black in AI is a place for sharing ideas, fostering collaborations and discussing initiatives to increase the presence of Black people in the field of Artificial Intelligence. If you are in the field of AI and self-identify as Black, please fill out this Google Form to request to join and we will add you to various platforms that we maintain. We also welcome allies to join our group using the Google form. Allies will be added to our email lists, where we send out group updates and requests for assistance.

Like our Facebook Page and follow us on Twitter to learn about our members and various activities!

Latest Tweets by Black in AI

Related Organizations

- Black Girls Code
- Data Science Africa
- Deep Learning Indaba

Workshops

- 2nd Black in AI Workshop, 2018
  in Conjuction with NIPS 2018
- 1st Black in AI Workshop, 2017

Amazon Is Pushing Facial Technology That a Study Says Could Be Biased

In new tests, Amazon's system had more difficulty identifying the gender of female and darker-skinned faces than similar services from IBM and Microsoft.

Face Recognition.

Error Rate(1-PPV) By Female x Skin Type

	TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
Microsoft	1.7%	1.1%	3.3%	0%	23.2%	25.0%
FACE++	11.9%	9.7%	8.2%	13.9%	32.4%	46.5%
IBM	5.1%	7.4%	8.2%	8.3%	33.3%	46.8%

Buolamwini & Gebru FAT* 2018, Slides from Joy Buolamwini

Couldn’t publish findings in mainstream conferences in my field. So co-founded a conference called Fairness Accountability and Transparency in Sociotechnical systems. Published there.

–Paper becomes resource for those fighting back.

Microsoft improves facial recognition technology to perform well across all skin tones, genders

June 26, 2018 | John Roach

IBM

IBM Research Blog Topics Labs About

AI

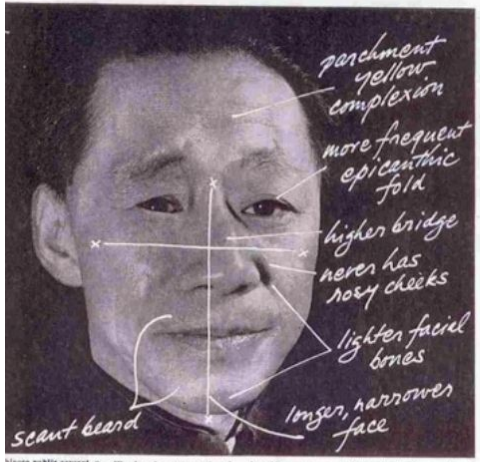
IBM Research Releases ‘Diversity in Faces’ Dataset to Advance Study of Fairness in Facial Recognition Systems

I was working at Microsoft at the time, and I audited Microsoft, published my findings. I didn’t get fired. Why?

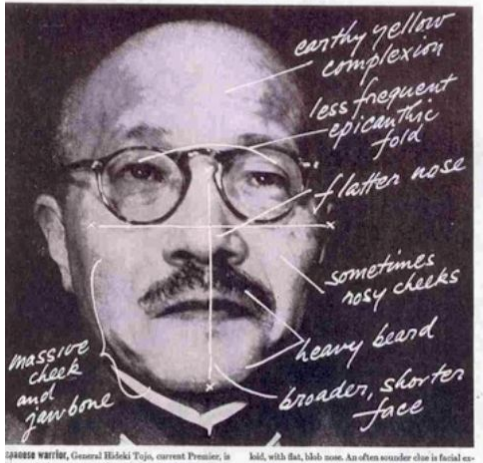
But, is “unbiased” face recognition system what we want?

HOW TO TELL JAPS FROM THE CHINESE

ANGRY CITIZENS VICTIMIZE ALLIES WITH EMOTIONAL OUTBURST AT ENEMY



hinese public servant, Ong Wen-hao, is representative of orth Chinese anthropological group with long, fine-boned ce and scant beard. Epicanthic fold of skin above eyelid found in 85% of Chinese. Southern Chinese have round, broad faces, not as massively boned as the Japanese. Except that their skin is darker, this description fits Filipinos who are often mistaken for Japs. Chinese sometimes pass for Europeans; but Japs more often approach Western types.



apanese warrior, General Hideki Tojo, current Premier, is Yamurai, closer to type of humble Jap than highbred relaives of Imperial Household. Typical are his heavy beard, assive cheek and jaw bones. Peasant Jap is squat Mongoloid, with flat, blob nose. An often sounder clue is facial expression, shaped by cultural, not anthropological, factors. Chinese wear rational calm of tolerant realists. Japs, like General Tojo, show humorless intensity of ruthless mystics.

In the first discharge of emotions touched off by the Japanese assaults on their nation, U. S. citizens have been demonstrating a distressing ignorance on the delicate question of how to tell a Chinese from a Jap. Innocent victims in cities all over the country are many of the 75,000 U. S. Chinese, whose homeland is our stanch ally. So serious were the consequences threatened, that the Chinese consulates last week prepared to tag their nationals with identification buttons. To dispel some of this confusion, LIFE here adduces a rule-of-thumb from the anthropometric conformations that distinguish friendly Chinese from enemy alien Japs.

To physical anthropologists, devoted debunkers of race myths, the difference between Chinese and Japs is measurable in millimeters. Both are related to the Eskimo and North American Indian. The modern Jap is the descendant of Mongoloids who invaded the Japanese archipelago back in the mists of prehistory, and of the native aborigines who possessed the islands before them. Physical anthropology, in consequence, finds Japs and Chinese as closely related as Germans and English. It can, however, set apart the special types of each national group.

The typical Northern Chinese, represented by Ong Wen-hao, Chungking's Minister of Economic Affairs (*left, above*), is relatively tall and slenderly built. His complexion is parchment yellow, his face long and delicately boned, his nose more finely bridged. Representative of the Japanese people as a whole is Premier and General Hideki Tojo (*left, below*), who betrays aboriginal antecedents in a squat, long-torsoed build, a broader, more massively boned head and face, flat, often pug, nose, yellow-ocher skin and heavier beard. From this average type, aristocratic Japs, who claim kinship to the Imperial Household, diverge sharply. They are proud to approximate the patrician lines of the Northern Chinese.

Chinese journalist, Joe Chiang, found it necessary to advertise his nationality to gain admittance to White House press conference. Under Immigration Act of 1924, Japs and Chinese, as members of the "yellow race," are barred from immigration and naturalization.

CONTINUED ON NEXT PAGE

The New York Times

SUBSCRIBE NOW LOG IN

One Month, 500,000 Face Scans: How China Is Using A.I. to Profile a Minority

In a major ethical leap for the tech world, Chinese start-ups have built algorithms that the government uses to track members of a largely Muslim minority group.

US ADULTS INDEXED

130 MILLION

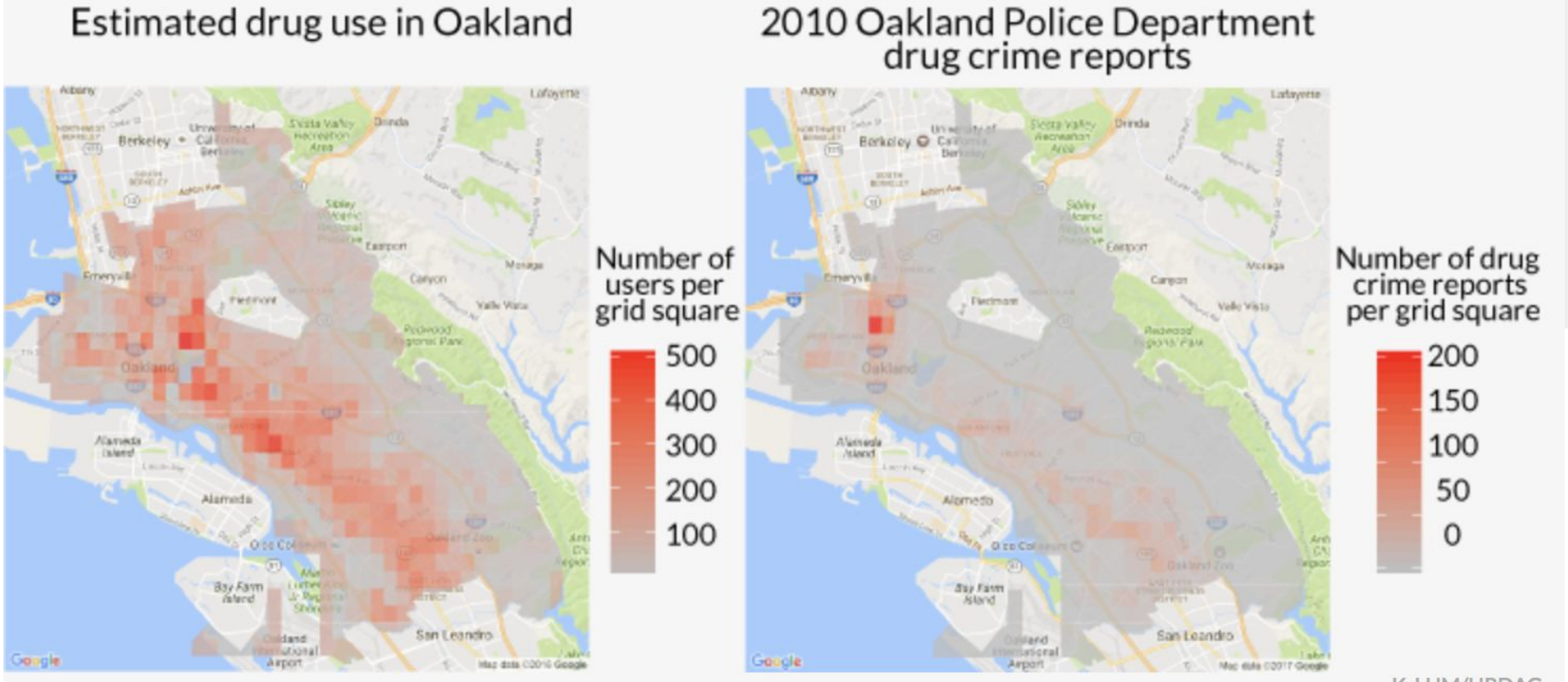
One in two American adults is in a law enforcement face recognition network used in unregulated searches employing algorithms with unaudited accuracy.

The Perpetual Line Up

(Garvie , Bedoya, Frankle 2016)

© 2016 Center on Privacy & Technology at Georgetown Law

Drug use in Oakland is probably fairly widespread (left) based on estimates derived in part from the 2011 National Survey on Drug Use and Health. But police records of drug reports and crimes are concentrated in areas that are largely nonwhite and low-income (right).



K. LUM/HRDAG

Amazon Pushes Facial Recognition to Police. Critics See Surveillance Risk.

Amazon tried to discredit our research. I wanted to support my collaborators, but now I was at Google. If I publicly said something about Amazon, I was going to get in trouble.

Any ideas on what I could do?

1. We wrote an anonymous letter doing a point by point technical take down.
2. We circulated for signatures among many academics.
3. We couldn’t be the public facing people behind the letter, so we asked a number of people who could make headlines to speak to the press.

Bloomberg the Company & Its Products | Bloomberg Terminal Demo Request | Bloomberg Anywhere Remote Login | Bloombe

Bloomberg

Live TV Markets Economics Industries Tech Politics Businessweek Opinion More

Technology

Amazon Schooled on AI Fac
Technology By Turing Award Winner

Yoshua Bengio is among 26 AI scientists calling
Rekognition to police

The New York Times

A.I. Experts Question Amazon's Facial-Recognition Technology

Share full article

Unregulated AI is terrible, but also, regulation can be used to oppress people. So we can’t just “follow the rules.”

Extreme Vetting Initiative Objectives (cont.)

Performance Objectives of the Overarching Vetting Contract:

1. Centralizes screening and vetting processes to mitigate case backlog and provide law enforcement and field agents with timely, actionable information;

2. Allows ICE to develop richer case files that provide more value-added information to further investigations or support prosecutions in immigration or federal courts;

3. Allows ICE to perform regular, periodic and/or continuous review and vetting of nonimmigrants for changes in their risk profile after they enter the United States and;

4. Automates at no loss of data quality or veracity any manually-intensive vetting and screening processes that inhibit ICE from properly and thoroughly vetting individuals in a timely fashion.

THESE ARE THE TECHNOLOGY FIRMS LINING UP TO BUILD TRUMP'S "EXTREME VETTING" PROGRAM

ICE's Homeland Security Investigations division hosted an "industry day" for technology companies interested in building a new tool for "extreme vetting."

Sam Biddle, Spencer Woodman

August 7 2017, 1:45 p.m.

Share

https://theintercept.com/2017/08/07/these-are-the-technology-firms-lining-up-to-build-trumps-extreme-vetting-program/

I signed a letter against the extreme vetting initiative. But now that means I can be a targeted by the government.

Who do you think developed face recognition? Under what incentive structures?

In 2020, I’m at Google. BLM protests are going on, I see things like this….

Comment | Published: 17 June 2021

Large language models associate Muslims with violence

Abubakar Abid, Maheen Farooqi & James Zou

Nature Machine Intelligence **3**, 461–463 (2021) | Cite this a

3898 Accesses | **113** Citations | **248** Altmetric | Metrics

Large language models, which are increasingly used undesirable stereotypes such as persistent associat New approaches are needed to systematically reduc models in deployment.

ARTIFICIAL INTELLIGENCE

Training a single AI model can emit as much carbon as five cars in their lifetimes

Deep learning has a terrible carbon footprint.

By Karen Hao June 6, 2019

I don’t want Google to go all in on LLMs. What can I do to stop them?

What are the incentives of

- -Google VP of research
- -Google CEO, board
- -My team
- -Google coworkers.
- -Journalists
- -Indigenous people losing lands to datacenters.
- -US Legislators
- -Academics in CS
- -Academics in other disciplines.
- -Other stakeholders?

I wrote an academic paper. They told me to retract it. I said not without transparency as to why. I got fired. What if I had to feed a family? How would my calculations possibly have changed?

TOM SIMONITE THE BIG STORY JUN 8, 2021 6:00 AM

What Really Happened When Google Ousted Timnit Gebru

She was a star engineer who warned that messy AI can spread racism. Google brought her in. Then it forced criticism from within?

Mozilla

They tried to ruin my reputation but they didn’t succeed. Why?

I decided to create my own institute that doesn’t abide by the incentive structures of academia or industry.

Opinion Technology

This article is more than 3 years old

For truly ethical AI, its research must be independent from big tech

Timnit Gebru

We must curb the power of Silicon Valley and protect those who speak up about the harms of AI

Mon 6 Dec 2021 13.33 GMT

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109

https://www.theguardian.com/commentisfree/2021/dec/06/google-silicon-valley-ai-timnit-gebru

But is my research truly independent? What are my institute’s incentive structures? Who holds power over us?

Science is inherently political. So is technology. Question the power structure, funding and interests involved.

Feminists have long critiqued "the view from nowhere": the belief that science is about finding objective "truths" without taking people's lived experiences into account.

According to most feminists and some pragmatists, the acknowledgment of both subject and object as historically and politically situated requires that the subjects and objects of knowledge be placed on a more level playing field. When this is done, objectivity, as a form of responding to the rights and well being of fellow subjects as well as the objects of scientific inquiry, must be considered (Heldke & Kellert, 1995). Objectivity, then, is achieved to the extent that responsibility in inquiry is fulfilled and expanded. It follows that scientists must be held accountable for the results of their projects and that scientists must acknowledge the political nature of their work. Objectivity understood as such implies relationships between people, objects, and inquiry projects as central to its conception (Sullivan, 2001). **-- Replacing the "View from Nowhere": A Pragmatist-Feminist Science Classroom**

https://wolfweb.unr.edu/homepage/crowther/ejse/stitzlein.pdf

There is no perfect place to work. To ensure you don’t do harm or at least minimize it:

1. Question the incentive structure of anyone you get information for, especially people in power.

2. Get your information from those most negatively impacted by the tech, not from those who are most likely to benefit.

3. Build a network of mutual support for collective organizing.