



Ali Rahimi - NIPS 2017 Test-of-Time Award presentation

"Machine learning has become

alchemy"



Yann LeCun

December 6 at 8:57am · 🚱

My take on Ali Rahimi's "Test of Time" award talk at NIPS.

Ali gave an entertaining and well-delivered talk. But I fundamentally disagree with the message.

The main message was, in essence, that the current practice in machine learning is akin to "alchemy" (his word).

It's insulting, yes. But never mind that: It's wrong!

OUR CLASSIFIERS







Academic Researcher



Professional Poker Player



Terrorist

Utilizing advanced machine learning techniques we developed and continue to evolve an array of classifiers. These classifiers represent a certain persona, with a unique personality type, a collection of personality traits or behaviors. Our algorithms can score an individual according to their fit to these classifiers.

Learn More>

Yes...together we can beat depression

mind.me is a passive application that, once installed on a mobile device, requires no input or effort from the user. By connecting data feeds into the application, mind.me is able to ambiently monitor behavior. The app follows a set it and forget it approach. When mind.me predicts the early symptoms of depression, notifications will be sent to the user's predetermined circle of trust.









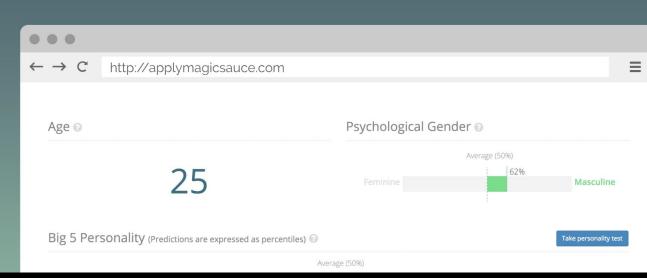
Apply Magic Sauce

Personalise the Internet

A personalisation engine that accurately predicts psychological traits from digital footprints of human behaviour

See how others see you

Predict My Profile





Vegetable Compound is the most universally successful remedy for woman's ills known to medicine,

All sick women should note these facts, and placing all possible prejudices aside, should realize the truthfulness of these statements, and that a cure for their troubles actually exists.

Wise is the woman who has faith in Lydia E, Pinkham's Vegetable Compound, for health and happiness is sure to follow its use.

YOU CAN GET HELPFUL ADVICE FREE .- If there is anything about your illness you do not understand, Mrs. Pinkham, at Lyun, Mass., will be glad to receive a letter from you telling her all the details. She will send you promptly a reply which may save you years of suffering and pain. She has helped thousands of women. For all this she will not charge you a cent; besides, she will keep your letter strictly confidential. Write her to-day,



KIDNEY&LIVER

(Formerly Dr. Craig's Kidney Cure.) A vegetable preparation and the only sure remedy in the world for Bright's Disease, Diabetes, and ALL Midney, Liver, and Urimary Diseases. Me Testimonials of the highest order in proof of these statements. Be For the cure of Diabetes, call for Warner's Safe Diabetes Cure. AND For the cure of Bright's and the other discusses, call for Warmer's Mafe Kidmey and Liver Cure, WARNER'S

where.

Safe Remedies are sold by Druggists and Dealers in Medicine every-

H. H. Warner & Co. Proprietors. BOCHESTER, I. I. Bend for Pamphlet and Testimonials

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Doctors and Nurses recommend 'California Syrup of Figs'

They know it to be a perfectly safe own laxative. and natural fruit laxative. It ensures gentle but thorough action and the kiddies love its delicious flavour.

When your child gets cross and peevish, has a coated tongue and a headache, all that is needed to restore health and happiness is

'California Syrup of Figs,' Nature's The wise mother follows the advice

of doctors and nurses and gives a dose of 'California Syrup of Figs' brand laxative each week. 1/5 and 2/10 (Including Purchase Tax) everywhere. Be sure to emphasize 'CALIFORNIA.'

PUBLIC OPINION Secretar, 49 Secretar, 1979.



COLLIER'S EXPOSÉ

PATENT MEDICINE FRAUD

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The Great American Fraud: Articles On the Nostrum Evil and Quacks, in Two Series, Reprinted from Collier'S Weekly -Primary Source Edition

Samuel Hopkins Adams

Alis made by

humans

as developers, engineers, product owners, designers, data scientists

We make choices

"...to be a proper professional you need to think about the context and motivation and justifications of what you're doing...

You see I could probably write a very good program for choosing people to be killed for some reason, selecting people from a population by a particular criterion. But you might argue that a true professional would say, 'I don't think I should be writing programs about this at all.'

The point is that there is an interaction between the context and the programming task itself."

Karen Spärck Jones FBA (1935-2007)

Volkswagen Engineer Gets Prison in Diesel Cheating Case



James Liang, a Volkswagen engineer, is the first employee sent to prison in the scandal that has tainted the company's reputation and cost it billions in fines and settlements with consumers.

We weigh tradeoffs

Facial Recognition Is Accurate, if You're a White Guy

By Steve Lohr



Facial recognition technology is improving by leaps and bounds. Some commercial software can now tell the gender of a person in a photograph.

When the person in the photo is a white man, the software is right 99 percent of the time.

But the darker the skin, the more errors arise — up to nearly 35 percent for images of darker skinned women, according to a new study that breaks fresh ground by measuring how the technology works on people of different races and gender.

These disparate results, calculated by Joy Buolamwini, a researcher at the M.I.T. Media Lab, show how some of the biases in the real world can seep into artificial intelligence, the computer systems that inform facial recognition.

We navigate ethics

'The Business of War': Google Employees Protest Work for the Pentagon



Thousands of Google employees have signed a letter to Sundar Pichai, the company's chief executive, protesting Google's role in a program that could be used to improve drone strike targeting.

Michael Short/Bloomberg

Three provocations

- 1. A failure to communicate
- 2. Optimism without accountability
- 3. Downplaying of "soft" in software engineering

Please don't learn to code | TechCrunch

graduate student at the Georgia Institute of Technology ...

Perhaps with all of the recent excitement around ...

https://techcrunch.com/2016/05/10/please-dont-learn-to-code/ ▼ May 11, 2016 - There's an idea that's been gaining ground in the tech community lately: Everyone should learn to code. But here's the problem with that idea: ...

10 Life-Changing Reasons You Should Learn to Code - Skillcrush

https://skillcrush.com/2015/01/28/laurence-bradford-10-reasons/ ▼

May 8, 2018 - Learning to code gave her the life and career she never dreamed of. ... Everyone has different reasons for wanting to learn how to build ...

Should Everybody Learn to Code? | February 2014 | Communications ... https://cacm.acm.org/magazines/2014/2/...should-everybody-learn-to-code/fulltext • by E Shein - Cited by 36 - Related articles

To gauge the ability of professional graphic designers to do basic programming, Brian Dorn, then a

Should We Really Try to Teach Everyone to Code? | WIRED

https://www.wired.com/insights/2015/.../should-we-really-try-to-teach-everyone-to-co... ▼ It's hard to read a blog or news site these days without stumbling across an article about why everyone should learn to code. It's a rallying cry that's given rise to ...

Should everybody learn to code? - ResearchGate

https://www.researchgate.net/publication/262326020 Should everybody learn to code

Future work could investigate why such misconceptions form about programming in the first place.

rule enforced by Phil, who's not an engineer. Nobody's sure what Phil does, but it's definitely full of synergy and has to do with upper management, whom none of the engineers want to deal with so they just let Phil do what he wants. Sara, meanwhile, has found several hemorrhaging-edge paving techniques, and worked them all into the bridge design, so you'll have to build around each one as the bridge progresses, since each one means different underlying support and safety concerns. Tom and Harry have been working together for years, but have an ongoing feud over whether to use metric or imperial measurements, and it's become a case of "whoever got to that part of the design first." This has been such a headache for the people actually screwing things together, they've given up and just forced, hammered, or welded their way through the day with whatever parts were handy. Also, the bridge was designed as a suspension bridge, but nobody actually knew how to build a suspension bridge, so they got halfway through it and then just added extra support columns to keep the thing standing, but they left the suspension cables because they're still sort of holding up parts of the bridge. Nobody knows which parts, but everybody's pretty sure they're important parts. After the introductions are made, you are invited to come up with some new ideas, but you don't have any because you're a propulsion engineer and don't know

Would you drive across this bridge? No. If it somehow got built, everybody involved would be executed. Yet some version of this dynamic wrote every single program you have ever used, banking software, websites, and a ubiquitously used program that was supposed to protect information on the internet but didn't.

anything about bridges.

Programming Sucks, by Peter Welch https://www.stilldrinking.org/programming-sucks

Failing to communicate creates failures to

comprehend





"Our identities have no bodies, so, unlike you, we cannot obtain order by physical coercion. We believe that from ethics, enlightened self-interest, and the commonweal, our governance will emerge. Our identities may be distributed across many of your jurisdictions. The only law that all our constituent cultures would generally recognize is the Golden Rule."

John Perry Barlow, A Declaration of the Independence of Cyberspace

"Recasting all complex social situations either as neatly defined problems with definite, computable solutions or as transparent and self-evident processes that can be easily optimized—if only the right algorithms are in

self-evident processes that can be easily optimized—if only the right algorithms are in place!—this quest is likely to have unexpected consequences that could eventually cause more damage than the problems they seek to address." Evgeny Morozov

We are optimists with power, but without accountability





"Just don't tell anyone; it will hurt my tech cred." - a tech manager after I praised her EQ.

Compassionate Coding @compassioncode You can either have technical skills or interpersonal skills, but not both.



8:37 PM - 16 Oct 2017

















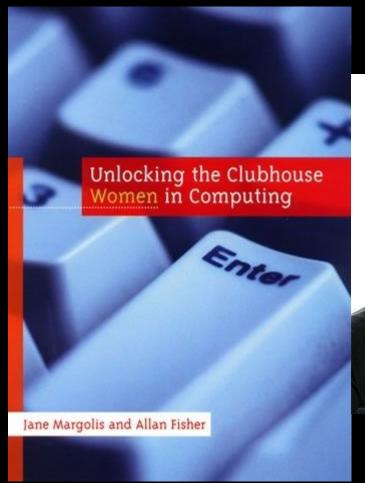








Tweet your reply





Last time I gave a talk like this...

consider context

make best practice expected

practice

be open

seek out

disagreement

cultivate

uncertainty

"What we absolutely should not be doing is teaching data

scientists ethics"

"It is imperative in science to doubt; it is absolutely necessary, for progress in science, to have uncertainty as a fundamental part of your inner nature. To make progress in understanding, we must remain modest and allow that we do not know. Nothing is certain or proved beyond all doubt. You investigate for curiosity, because it is unknown, not because you know the answer. And as you develop more information in the sciences, it is not that you are finding out the truth, but that you are finding out that this or that is more or less likely."

Richard Feynman, The Pleasure of Finding Things Out







thank you

@ellenbroad