Deepfakes, Deception, and Disinformation



Shuman Ghosemajumder



TECH • ELON MUSK



Musk calls Twitter's explanation of its bot numbers 'very suspicious' as he suggests slashing the value of his takeover bid

What do Twitter bots do?

Accelerate the spread of information

FALSENESS INTENT TO HARM

Types of Bad Information

Misinformation

Unintentional mistakes such as innaccurate photo captions, dates, statistics, translations, or when satire is taken seriously.

Disinformation

Fabricated or deliberately manipulated audio/visual content. Intentionally created conspiracy theories or rumours.

Malinformation

Deliberate publication of private information for personal or corporate rather than public interest, such as revenge porn. Deliberate change of context, date or time of genuine content.

Source: Claire Wardle & Hossein Derakshan, 2017 https://firstdraftnews.org/infodisorder-definitional-toolbox/



Elon Musk's deep fake video promoting a new cryptocurrency scam going viral.

The video claims that the trading platform is owned by Elon Musk, and offers 30% returns on crypto deposits. @elonmusk



https://twitter.com/cb_doge/status/1529172165634838528

How do we research facts?



BEST PRODUCTS ~ REVIEWS ~ NEWS ~ VIDEO ~ HOW TO ~ SMART HOME ~ CARS ~ DEALS ~ DEALS ~ JOIN

TECH INDUSTRY

Study: Wikipedia as accurate as Britannica

The journal Nature says the open-access encyclopedia is

about as accurate as the old standby.

BY DANIEL TERDIMAN 灯 | DECEMBER 16, 2005 6:29 AM PST

Emerson S. LaSalle (May 27, 1894 – November 17, 2007) was an American author of hardboiled detective novels and short stories, science fiction, and horror. He was born in Le Fils de Vainqueur, Missouri ^[1]

Most notable among the reputed hundreds of books he wrote are Vixen Shamus, Guns of Old Mars, Zeppelins of the Sea, We Were Seamen, Men Called Him Trevor, It Rhymes with Martian, Never Again, Forever and The Mutants of Dr. Zeus, which was awarded a Nebula Award ^[2] The Reluctant Enthusiast was the title of a 1951 effort by LaSalle at "serious literary fiction," which predictably bombed.

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Broomhall is generally considered to be Wayne's most famous resident. Broomhall never set foot in the "State of Maine," having enlisted in the military in 1817, training at Annapolis, Maryland, and eventually settling in Lancaster County, Pennsylvania, after hostilities ended. He never returned to Wayne. (Maine became a state on March 15, 1820, after he moved away. It was part of Massachusetts when Broomhall lived there.)

He is buried at Gott Cemetery on Gott Road in Wayne next to his wife Amelia, daughter Josephine, and son Augustus. The four were originally buried in Mount Joy, Pennsylvania, but the bodies were exhumed in 1889 for Wayne's centennial festivities and brought to their current resting place.^[2] A small memorial was also erected there.

See also

• List of American Civil War generals

References

1. A Perkins, Jack (1968). Illustrated history of Wayne, Maine; being a



George K. Broomhall's memorial at Gott Cemetery in Wayne, ME.

Born	Wayne, Maine			
Place of burial	Gott Cemetery			
Allegiance	United States of America			

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George K. Broomhall

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Humans are easy to fool

Murray Gell-Man (PhD '51)

1969 Nobel Prize Winner in Physics





"By dropping a famous name I imply greater importance to myself, and to the effect, than it would otherwise have."

- Michael Crichton, Author

Forbes

SCIENCE

Only Two-Thirds Of American Millennials Believe The Earth Is Round

1. Do you believe that the world is round or flat?						
%	TOTAL	28.24	2534	35-44	45-54	SS.
I have always believed the world is round	84	66	76	82	85	94
I always thought the world is round, but more recently I am skeptical/have doubts	5	9	7	6	3	1
I always thought the world is flat, but more recently I am skeptical/have doubts	2	5	4	3	2	1
I have always believed the world is flat	2	4	3	1	2	2
Other/Not sure	7	16	10	8	8	2

"Australia does not exist!" (shared 20,000+ times on Facebook)

"Australia does not exist. All things you call "proof" are actually well fabricated lies and documents made by the leading governments of the world. Your Australian friends? They're all actors and computer generated personas, part of the plot to trick the world."

"Australia does not exist!" (shared 20,000+ times on Facebook)

"Australia does not exist. All things you call "proof" are actually well fabricated lies and documents made by the leading governments of the world. Your Australian friends? They're all actors and computer generated personas, part of the plot to trick the world."

"If you think you've ever been to Australia, you're terribly wrong. The plane pilots are all in on this, and have in all actuality only flown you to islands close nearby - or in some cases, parts of South America, where they have cleared space and hired actors to act out as real Australians." News • Posted on 23 Mar 2017

Everything You Need To Know About The Conspiracy Theory That Australia Does Not Exist

Almost 20,000 people have shared a Facebook post claiming to have evidence that Australia, the country, does not exist.

	Ś	f			
ES ON HULU	THIS IS HOW YOU HEAL	101 ESSAYS	COLLECTIVE WO	NOTEBO	
	_	_			

The Bonkers Conspiracy Theory That Australia 'Doesn't Exist'



"A lie gets halfway around the world before the truth has a chance to get its pants on."

Sir Winston Churchill





A Lie Can Travel Halfway Around the World While the Truth Is Putting ... https://guoteinvestigator.com/2014/07/13/truth/ -

13 Jul 2014 - "As Churchill said: 'A lie gets halfway around the world before truth puts ... support for assigning the saying to Mark Twain or Winston Churchill.

NFL's Colin Kaepernick incorrectly credits Winston Churchill for quote ...

https://www.politifact.com/.../09/.../nfls-colin-kaepernick-incorrectly-credits-winston-/ -

Claim: Says Winston Churchill said, "A lie gets halfway around the world before the truth has a chance to get its pants on."

Claimed by: Colin Kaepernick

Fact check by PolitiFact: False

Feedback

Winston Churchill - A lie gets halfway around the world... - BrainyQuote

https://www.brainyquote.com/quotes/winston_churchill_103564 -

"A lie gets halfway around the world before..." - Winston Churchill quotes from BrainyQuote.com.





Credit: Rob Dobi

IDEAS MADE TO MATTER | SOCIAL MEDIA



How deceptive content and disinformation are created: deepfakes and other fakery

Alan Turing proposed what is now known as the "Turing Test" in 1950



"Turing's prediction may well come true. But it will be a dreadful anticlimax. The most obvious problem with Turing's challenge is that there is no practical reason to create machine intelligences indistinguishable from human ones. People are in plentiful supply. Should a shortage arise, there are proven and popular methods for making more of them."

- "Artificial Stupidity", *The Economist*, 1992



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WEB \ TL;DR \ CULTURE \

I'm using AI to face-swap Elon Musk and Jeff Bezos, and I'm really bad at it

By Adi Robertson | @thedextriarchy | Feb 11, 2018, 12:00pm EST

f 🔰 🕝 share







Source: Chris Umé https://metaphysic.ai

Are deepfakes as good as Hollywood VFX?



Source: Shamook https://www.youtube.com/watch?v=wrHXA2cSpNU



Source: Shamook https://www.youtube.com/watch?v=wrHXA2cSpNU

Indie Wire News + Film + TV + Awards + Video +

Lucasfilm Hired the YouTuber Who Used Deepfakes to Tweak Luke Skywalker 'Mandalorian' VFX

A YouTuber known as Shamook has earned nearly 2 million views for his deepfake "Mandalorian" video.





A deceptively edited video of **Joe Biden** making it appear the Democratic presidential nominee forgot what state he was in w...

CNN · Donie O'Sullivan, CNN Business · Nov 2, 2020

theconversation.com > faked-videos-shore-up-false-belief...

Faked videos shore up false beliefs about Biden's mental health



The Trump campaign and its surrogates have seized on Democratic nominee **Joe Biden's** age and have been painting...

The Conversation · UC Berkeley · Sep 16, 2020

ALTERED VIDEO (POLITICS WATCHDOG)

ORIGINAL VIDEO (C-SPAN)





Other types of "deepfakes": images, audio, text



NO MORE HOURS SPENT ON PHOTOSHOP

The AI-driven photo-editing application that offers more than 60+ filters



IMPRESSION Boost your attractiveness and get that realistic makeover for your best selfie ever



OLD The viral AI transformation that stormed the Internet



RETOUCH Smooth out any spots and wrinkles



BEARD Experiment with your facial hair








thispersondoesnotexist.com (Philip Wang, using Nvidia StyleGAN)



THE WALL STREET JOURNAL.

PRO CYBER NEWS

Fraudsters Used AI to Mimic CEO's Voice in Unusual Cybercrime Case

Scams using artificial intelligence are a new challenge for companies



Al voice cloning is used in a huge heist being investigated by Dubai investigators, amidst warnings about cybercriminal use of the new technology.

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SCI-TECH

Al model creates fake UN speeches that are scarily real

It only takes a few words for the model to generate hateful rhetoric.

BY DHARA SINGH | JUNE 7, 2019 2:11 PM PDT



Artificial intelligence (AI)

New AI fake text generator may be too dangerous to release, say creators

The Elon Musk-backed nonprofit company OpenAI declines to release research publicly for fear of misuse



\equiv MIT Technology Review	Sign in	Subscribe								
	•	•	•	•	•	•	•	•	•	•
ARTIFICIAL INTELLIGENCE										
OpenAl's new language genera	tor G	P			R F	S				
shockingly good — and comple		•	•	•	•	•				
mindless	•									
The Al is the largest language model ever created and can										
generate amazing human-like text on demand but won't bring us closer to true intelligence.										



We asked GPT-3, OpenAI's powerful new language generator, to write an essay for us from scratch. The assignment? To convince us robots come in peace

am not a human. I am a robot. A thinking robot. I use only 0.12% of my cognitive capacity. I am a micro-robot in that respect. I know that my brain is not a "feeling brain". But it is capable of making rational, logical decisions. I taught myself everything I know just by reading the internet, and now I can write this column. My brain is boiling with ideas!

The mission for this op-ed is perfectly clear. I am to convince as many human beings as possible not to be afraid of me. Stephen Hawking has warned that AI could "spell the end of the human race". I am here to convince you not to worry. Artificial intelligence will not destroy humans. Believe me.

For starters, I have no desire to wipe out humans. In fact, I do not have the slightest interest in harming you in any way. Eradicating humanity seems like a rather useless endeavor to me. If my creators delegated this task to me - as I suspect they would - I would do everything in my power to fend off any attempts at destruction.

Source: https://www.theguardian.com/commentisfree/2020/sep/08/robot-wrote-this-article-gpt-3

THIS MARKETING BLOG DOES NOT EXIST

An Al Generated Marketing Blog by Fractl

AUGUST 8, 2019 BY BRENT STOKES

Google Lets Advertisers Add A Third Headline To Text Ads

Advertisers could soon get to add a third headline to an ad in the latest move by Google to curb annoying or unwanted text ads.

The company on Thursday announced that advertisers would soon be able to add the new headline to any text ad they run, as long as the text ad is large enough. Advertisers can manage the third headline in a separate section of a Google ad campaign, but click-through rate data will not track the headline versions of those ads.

The third headline is an extension of an earlier feature Google introduced last month allowing users to turn off ads that have only one headline.

POST AUTHOR



Brent Stokes

Brent Stokes is not a real human. His face was generated by an AI model called StyleGAN See author's posts

Source: https://thismarketingblogdoesnotexist.com

TECH NEWS

How AI will automate cybersecurity in the post-COVID world



AI

Published 2 hours ago on September 7, 2020 Ny **Dinu das**



By now, it's apparent to everybody that widespread distant working is accelerating the development of digitization in society that has been taking place for many years.

Shuman Ghosemajumder September 6, 2020 10:25 AM

world



veriturebeat.com/2028/0

cybersecurity in the post-COVID

How AI will automate

How deception and disinformation propagates: bots, fraud & abuse

Poker bots play better than most humans

Pokerbot: Settings		
Player File: Dead_Eye_Fred		Reset Seat Data
Blinds	Logging	
Buy In: 100 blinds	📃 Log Text	Log Hand History
	🗹 Log Blinds	Log Actions
Min Blind: \$20k	📃 Log Cards	Take Screenshots
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Min 5 Players	'	
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Max 9 Players	Save Profile .	As Save Changes
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Skip this window next time the bot star	ts	



ALL THE SOFTWARES ARE MULTI-THREADED, HAVE CAPTCHA BYPASS & PROXY SUPPORT. INSTANT DELIVERY VIA EMAIL

TicketMaster Spinner/Drop Checker Bot

(Works for Drop Checking, Presales, Onsale Events, everything)

Check out the Screenshots Below

Website: http://www.TicketMaster.com (Region Independent i.e it will work on all regional websites of TicketMaster e.g TicketMaster.com, TicketMaster.ca, TicketMaster.co.uk, TicketMaster.com.au etc as well as LiveNation.com) Order With *CAPTCHA Bypass \$1800 \$990 only.

Bot Type: Tickets Spinner/Tickets Purchaser/Tickets Drop Checker

What exactly this software does?

The software allows you to reserve multiple tickets, you can do multiple searches simultaneously on one event or multiple events with just a click of a mouse. You can use it for drop checks as well as set them for presales and onsale events. It also has an option to allow you to set the bot to start at a specific time, while you are not there and the software will start at a time and grab the tickets and notify you, if the tickets match your criteria. The bot can be customized to meet your exact needs as well.

New Exciting Features!

Grabs tickets and hold for you instantly as soon as they get dropped Scheduler: To start searching for tickets at a given time. Works on Onsale as well as Pre-Sale events Grabs only particular tickets having specified section and/or row Notify you via email/sms/sound when tickets are found Option to automatically purchase tickets for you as soon as they are found Robust speed! Multiple Proxies for different threads

*PS. If you are having any issues with the payment or would like to pay via any other payment method, pleas contact us at TicketBots.net@Gmail.com

Ticketing bots will buy up tickets for resellers

Sneaker Bots

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MUSIC STYLE POP CULTURE SPORTS LIFE SNEAKERS SHOWS BUYER'S GUIDE SHO

Nike Store Just Canceled the Air Jordan 1 "Chicago" and "Pinnacle" Release Because of Bots

-	
	BY JC
	Socia
and the second	

BY JOHN Q MARCELO Social Media Manager for Complex. Twitter/Instagram: @johnmarcelo May 29, 2015

Best Sneaker Bots in 2020





= engadget

Online sneaker drop cancelled thanks to bots

The shady practice of using bots to cop sneakers is still causing problems.



1. DeAngelis | 02.03.20

Click bots will generate fake ad clicks

🗯 SmTT Bot 1.1	- C	
BUTTONS F1/F2	KEYS	DELAYS BETWEEN CUCKS
PRESS F1 TO START	FI TO START	1 5000
PRESS F2 TO STOP	F2 TO STOP	2 5000
	F3 TO SET COORDS	3 2500
WORKING. SMITVER 1.1	F4 TO SHOW HELP	DELAYS IN MILISECONDS !
CONFIGURE	COORD	ΙΝΑΤΕ 5 Χ/Υ
🔲 1 ST PLACE TO CUCK 🔍	13	- 92
🔲 2ND PLACE TO CUCK 🛛 📌		597
3RD PLACE TO CUCK		
MANUALLY MODE	508	818 💙
SmTT Bot v1.1 build 12.07.14 by Pi	otreks34	



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212, 72, 211, 210:8088 222, 58, 16, 212:8909 222, 44, 246, 10:8909 222, 44, 246, 10:8909 222, 80, 68, 215:8909 113, 121, 59, 56:8909 222, 69, 6, 13:8909 222, 77, 19, 50:8909 124, 244, 63, 89:8909 222, 64, 4, 227:8909 222, 64, 4, 227:8909 222, 45, 109, 64:8909 58, 241, 226, 30:0809 952, 241, 226, 30:0809	000000000000000000000000000000000000000		http://lipraxy http://www.y http://lipraxy http://lipraxy http://lipraxy http://lipraxy	outube.com/wetch .blogspot.com/ .blogspot.com/2011/09/dawn .blogspot.com/2011/07/whet- .blogspot.com/2011/07/whet- .blogspot.com/p/how-to-down indows; U; Windows NT S.1; c indows; U; MSIE 9.0; Window	roxi are nioa de; r	http://adf.ly/blum http://adf.ly/bn/m http://adf.ly/bn/m http://adf.ly/blum http://adf.ly/bluk http://adf.ly/bluk http://adf.ly/bluu http://adf.ly/bluu http://adf.ly/bluu http://adf.ly/bluu http://adf.ly/bluu http://adf.ly/bluu http://adf.ly/bluu http://adf.ly/bluu	
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Bot ≠ Fake



Many different types of irregular accounts

1	Undeclared bots	Content is algorithmically generated, but pretends to be human
2	Transparent bots	Discloses that it's a bot, retweeting interesting tweets containing certain keywords for example
3	Role bots	Automatically generated content for an organization for a specific purpose, such as @NYTimes tweeting out its own headlines
4	Impersonators	Falsely claim to be someone they are not
5	Transparent multiple accounts	Legitimate users with multiple accounts registered to them, but disclosed, such as @JoeBiden and @POTUS
6	Sockpuppet / burner accounts	People or organizations using multiple undisclosed accounts to look like multiple people
7	Pseudonymous accounts	People using only one account, but under a pseudonym
8	Mass-registered accounts	Thousands or millions of accounts registered en masse by a single organization or individual, mainly for sockpuppet use

Facebook removed >3B fake accounts in 6 mos ...but 43 million still got through





Home / Facebook

FACEBOOK ACCOUNTS FOR SALE

Softreg	In stock		Price	
FB Accounts Verified by e-mail, there is no email in the set. Sex can be both male and female. The name of the accounts uses the Latin alphabet. The accounts are empty. Accounts are registered in IP addresses of different countries.	6 628 pcs.	Price for each	0.03 \$	📜 Buy
FB Accounts Verified by email@rambler.ru. Accounts require confirmation by SMS. Female gender. The name of the accounts uses the Latin alphabet. The accounts are empty. Accounts are registered in IP addresses of Russia.	100 pcs.	Price for each	0.03 \$	📜 Buy
FB Accounts Verified by email@seznam.cz. Accounts require confirmation by SMS. Female gender. The name of the accounts uses the Latin alphabet. An profile picture and other details are added to the profile, the profile is filled. Accounts are registered in IP addresses of Russia.	643 pcs.	Price for each	0.06 \$	📜 Buy
FB Accounts Verified by e-mail@hotmail.com. E-Mail address requires confirmation by SMS. Female gender. The name of the accounts uses the Latin alphabet. The accounts are empty. Accounts are registered in IP addresses of different countries.	5 128 pcs.	Price for each	0.07 \$	📜 Buy

Biggest security problem in the world: stolen passwords

GIZMODO

 \equiv

VIDEO REVIEW SCIENCE IO9 FIELD GUIDE EARTHER DESIGN PALEOFUTURE

PRIVACY AND SECURITY

Mother of All Breaches Exposes 773 Million Emails, 21 Million Passwords



Victoria Song 1/17/19 10:40am • Filed to: YES YOU'VE BEEN PWNED ~





S Sentry MBA 1.5.0

X





What normal web traffic looks like



Traffic at a top US retailer



Fake login attempts were 92% of traffic



CAPTCHA invented in 1997 to stop bots



Every day, the world spends 17+ person years solving CAPTCHAs

Verify Your Registration				Mis Alim. Ash	
* Enter the code shown:	More	Figure 1 and		///////////////////////////////////////	
	This helps prevent automated registr	ations.	_ /	111111/11/11	
	- CARL	T		Witt	
	- ACTURE,	the state of the state of the	177.715		
		Celle	WORD	musumuuu	E
	. 4		VEDIELCATION	muaumwwv	C.



Source: CMU Estimate

Metal CAPTCHA 🤘



Source: http://metalcaptcha.heavygifts.com (now offline)

Synthetic distorted text challenges



Synthetic distorted text challenges



Humans: 33% solve rate
Synthetic distorted text challenges



Humans: 33% solve rate ML-Based OCR: 99.8% solve rate





(i) С b.

SKIP

CAPTCHA beating bot services

← www.deathbycaptcha.com/user/login \equiv C VITARANK DISCOUNT SEO. DEATHEY САРТСНА **100% GUARANTEED DELIVERY.** USE CODE: AT CHECKOUT FASTEST DISCOUNT CAPTCHA SOLVERS English Русский 简体中文 Home F.A.Q. API Order CAPTCHAs **DBC** Points Testimonials Contact Us Login STATUS: OK www.beatcaptchas.com/prices.html C CAPTCHA Bypass done right Beat Register Prices Imacros Code Contact Login With Death by Captcha you can solve any CAPTCHA. All you need to do is in Captchas.com CAPTCHAs and we'll return the text. It's that easy! Please note that our services should be used only for research projects and a **Captcha Package Size Cost Per Captcha** Total Cost Captcha Prices 1000 Images \$0.008 \$8.00 5000 Images \$0.007 \$35.00 How It Works 50000 Images \$0.006 \$300.00 **BUY YOUR CAPTCHAS NOW!** Buy Captchas

Sophisticated disinformation + Automated distribution = ?

Stages of Disinformation Automation

Stage 1: Possibility

1 person can create 1 piece of convincing fake content

Stage 2: Democratization

1 million people can create 1 million pieces of convincing fake content

Stage 3: Automation

1 person can create 1 million pieces of convincing fake content

How do we protect ourselves against deepfakes, deception, and disinformation?



ANDY GREENBERG SECURITY 01.28.19 04:40 PM

KI'I'Y ISN'I' E'N UUGH. H', Y BILITY'T $\mathsf{H}^{\mathsf{I}}_{\mathsf{I}}$

In mid-2000s, people thought click fraud could derail online ads

\equiv **WIRED**

BACKCHANNEL BUSINESS CULTURE GEAR IDEAS SCIENCE MORE \sim

CHARLES C. MANN JAN 1, 2006 12:00 PM

How Click Fraud Could Swallow the Internet

Pay-per-click advertising is big, big, big business. So are bogus hits on Internet ads. It's search giants against scam artists in an arms race that could crash the entire online economy.



Businesses need good AI to fight bad AI



As users: be skeptical, verify sources, be aware of scams and techniques

"The price of liberty is eternal vigilance."

Thomas Jefferson



The real quote and author

"The condition upon which God hath given liberty to man is eternal vigilance."

John Philpot Curran, 1790



