February 2024



Reference Guide

Definitions

Artificial Intelligence (AI): the theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

Large Language Model (LLM): a statistical language model, trained on a massive amount of data, that can be used to generate and translate text and other content, and perform other natural language processing (NLP) tasks.

Machine Learning (ML): a subset of Al in which algorithms are trained on data sets to become machine learning models capable of performing specific

Deep Learning: a subset of ML, in which artificial neural networks (AANs) that mimic the human brain are used to perform more complex reasoning tasks without human intervention.

Natural Language Processing (NLP): a subset of computer science, Al, linguistics, and ML, natural language processing focuses on creating software capable of interpreting human communication.

Robotics: a subset of AI, computer science, and electrical engineering, robotics is focused on creating robots capable of learning and performing complex tasks in real world environments.

Red Teaming: in AI, is a practice of emulating real-world adversaries and their tools, tactics, and procedures to identify risks, uncover blind spots, validate assumptions, and improve the overall security posture of Al systems. Red teaming can also be used to elicit model vulnerabilities that might lead to undesirable behaviors, such as breaking away from the guardrails of

Neural Networks: also known as Artificial Neural Networks (ANN), are computing systems inspired by the structure and function of the human brain. They consist of interconnected nodes or neurons that are designed to recognize patterns and make decisions based on input data.



In the News Section.1 Government Updates Section.2 Al and Public Safety Section.3 Research and Resources Section.4 Law Enforcement Considerations Section.5

Meetings, Conventions, & Summits Section.6

Key Takeaways Section.7

Section.1 Artificial Intelligence in the News

Google Maps experiments with generative Al to improve discovery

Tech Crunch; February 1, 2024

Google Maps is introducing a generative AI feature to you discover new places. company announced today. Using large language models (LLMs), the new feature analyzes the over 250 million locations on Google Maps and contributions from over 300 million Local Guides to pull up suggestions based on what you're looking for. For instance, if you want to find cool thrift shops in San Francisco, you can search "places with a vintage vibe and Maps will generate shopping recommendations organized by categories, as well as "photo carousels and review summaries," the company explains. The new feature is meant to feel more conversational than the ordinary search experience. If you ask a follow-up question like "How about lunch?" the AI will take your previous interest in vintage and find restaurants that meet the criteria, such as an oldschool diner. Read the article: TechCrunch

Should Al play an ever-growing role in tackling crime?

BBC News; January 26, 2024

Artificial intelligence (AI) is increasingly being used by police forces around the world, but do the benefits always outweigh the risks? Sarah is a victim of domestic abuse and is scared and upset because her ex-husband is trying to break into her house. While Sarah is talking to a human, the call is also being transcribed by an Al software system, one that links directly into UK police databases. When she tells the handler the name of her husband and his date of birth, the Al quickly retrieves his details. It flashes up that the man has a gun license, which means that police officers need to get to the home as soon as possible. Although domestic abuse emergency calls are sadly all too common, the above example was thankfully not a live, real-world situation. Read the article: BBCNews

Elon Musk's Al start-up seeks to raise up to \$6 billion - FT

Reuters: January 26, 2024

Elon Musk's artificial intelligence start-up xAI is in talks to raise up to \$6 billion from global investors, the Financial Times reported on Friday, citing multiple people familiar with the matter. Thanks to the popularity of OpenAl's chatbot ChatGPT, the AI industry has been a rare bright spot in a subdued start-up funding environment. Googlebacked Anthropic and Microsoft-backed Inflection AI have also raised funds in recent months. Musk has also approached investors in Japan and South Korea, the report said. The billionaire CEO of Tesla has been vocal about his plans to build safer Al. Last year, the start-up xAl launched "Grok", a chatbot rivaling ChatGPT. Musk warned about developing AI and robotics outside Tesla, earlier this month, unless he gets more voting control at the electric-vehicle maker. He said he would be uncomfortable building Tesla into an AI leader unless he had 25% voting control. Read the article: Reuters

Tim Cook is finally talking about AI on his own

Business Insider; February 2, 2024

The Apple CEO has repeatedly fielded questions on the breakthrough technology, but on Thursday, he announced that the iPhone-maker's foray into generative Al would begin soon. "As we look ahead, we will continue to invest in these and other technologies that will shape the future," he said in a prepared speech delivered at the opening of the company's fourth-quarter earnings call. "That includes artificial intelligence, where we continue to spend a tremendous amount of time and effort, and we're excited to share the details of our ongoing work in that space later this year." His comments came on the eve of the launch of the \$3,500 Vision Pro headset as the company posted a bumper quarter that beat analysts' expectations. But it is the revelation that Apple will unveil its generative AI efforts this year that will undoubtedly have excited investors the most. Read the article: businessinsider





Section.2 Government Updates

U.S. FEDERAL

OMB Releases Implementation Guidance Following President Biden's Executive Order on Artificial Intelligence

November 1, 2023 Summary: President Biden signed a landmark Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence. As the United States takes action to realize the tremendous promise of AI while managing its risks, the federal government will lead by example and provide a model for the responsible use of the technology. As part of this commitment, today, ahead of the UK Safety Summit, Vice President Harris will announce that the Office of Management and Budget (OMB) is releasing for comment a new draft policy Governance. on Advancing Innovation. and Risk Management for Agency Use of Artificial Intelligence. guidance would establish Al governance structures in federal agencies, advance responsible innovation, increase transparency, protect federal workers, and manage risks from government uses of Al.

Link to full document: <u>OMB</u> <u>Memo Draft</u>

Link to White House Briefing: Briefing

NIST's Responsibilities Under the October 30, 2023 Executive Order Link: <u>nist.gov</u>

President Biden Issues Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence

October 30, 2023

Summary: The Executive Order establishes new standards for Al security, protects safety and Americans' privacy, advances equity and civil rights, stands up for consumers and workers, promotes competition. innovation and advances American leadership around the world, and more. As part of the Biden-Harris Administration's comprehensive strategy responsible innovation, Executive Order builds on previous actions the President has taken, including work that led to voluntary commitments from 15 leading companies to drive safe, secure, and trustworthy development of Al.

New Standards for Al Safety and Security:

- Require that developers of the most powerful AI systems share their safety test results and other critical information with the U.S. government.
- Develop standards, tools, and tests to help ensure that Al systems are safe, secure, and trustworthy.
- Protect against the risks of using AI to engineer dangerous biological materials.
- Establish an advanced cybersecurity program to develop AI tools to find and fix vulnerabilities in critical software.
- Order the development of a National Security Memorandum that directs further actions on Al and security.

Link to full document: <u>Executive</u> <u>Order</u>

White House: Blueprint for an Al Bill of Rights Link: whitehouse.gov

Biden-Harris Administration Secures Voluntary Commitments from Leading Artificial Intelligence Companies to Manage the Risks Posed by Al

July 21, 2023

Summary: President Biden is convening seven leading AI companies at the White House today - Amazon, Anthropic, Google, Inflection. Meta. Microsoft, and OpenAI - to announce that the Biden-Harris Administration has secured voluntary commitments from these companies to help move toward safe, secure, transparent development of Al technology. Companies that are developing these emerging technologies have responsibility to ensure their products are safe. To make the most of Al's potential, the Biden-Harris Administration is encouraging this industry to uphold the highest standards to ensure that innovation doesn't come at the expense of Americans' rights and safety. These commitments, which the companies have chosen to undertake immediately, underscore three principles that must be fundamental to the future of AI - safety, security, and trust - and mark a critical step toward developing responsible AI.

Link to Fact Sheet: Voluntary
Commitments

INTERNATIONAL Spotlight

Bletchley Declaration

Summary: Leading Al nations, convened for the first time by the UK and including the United States and China, along with the European Union, have today (Wednesday 1 November 2023) reached a world-first agreement at Bletchley Park establishing a shared understanding of the opportunities and risks posed by frontier Al and the need for governments to work together to meet the most significant challenges.

The Bletchley Declaration on Al safety sees 28 countries from across the globe including Africa, the Middle East, and Asia, as well as the EU, agreeing to the urgent need to understand and collectively manage potential risks through a new joint global effort to ensure Al is developed and deployed in a safe, responsible way for the benefit of the global community.

Countries endorsing the Declaration include Brazil, France, India, Ireland, Japan, Kenya, the Kingdom of Saudi Arabia, Nigeria and the United Arab Emirates.

Link to The Bletchley Declaration: gov.uk

European Union Al Act

Summary: This regulation aims to ensure that fundamental rights, democracy, the rule of law and environmental sustainability are protected from high-risk AI, while boosting innovation and making Europe a leader in the field. The rules establish obligations for Al based on its potential risks and level of impact. Negotiators agreed on a series of safeguards and narrow exceptions for the use of biometric identification systems (RBI) in publicly accessible spaces for law enforcement purposes, subject to prior judicial authorization and for strictly defined lists of crime. "Post-remote" RBI would be used strictly in the targeted search of a person convicted or suspected of having committed a serious crime.

Links to EU Parliament News: 1europarl.europa.eu; 2europarl.europa.eu



Section.3 Al and Public Safety

OpenAI sued for defamation after ChatGPT fabricates legal accusations against radio host

The Verge; June 9, 2023

OpenAl has been hit with what appears to be the first defamation lawsuit responding to false information generated by ChatGPT. A radio host in Georgia, Mark Walters, is suing the company after ChatGPT stated that Walters had been accused of defrauding and embezzling funds from a non-profit organization. The system generated the information in response to a request from a third party, a journalist named Fred Riehl. Walters' case was filed June 5th in Georgia's Superior Court of Gwinnett County and he is seeking unspecified monetary damages from OpenAl. The case is notable given widespread complaints about false information generated by ChatGPT and other chatbots. These systems have no reliable way to distinguish fact from fiction, and when asked for information — particularly if asked to confirm something the questioner suggests is true — they frequently invent dates, facts, and figures. Read full article here: The Verae

Deepfake Imposter Scams Are Driving a New Wave of Fraud

Bloomberg; August 21, 2023

Al could turbocharge the cybertheft economy. The world's banking industry is scrambling to contain the risk. Computer-generated children's voices so realistic they fool their own parents. Masks created with photos from social media that can penetrate a system protected by face ID. They sound like the stuff of science fiction, but these techniques are already available to criminals preying on evervdav consumers. The proliferation of scam tech has alarmed regulators, police and people at the highest levels of the financial industry.

Read full article here: bloomberg.com

Graphic: A DALL-E 3 Al-generated image depicting a modern police station where officers employ futuristic technologies. Holographic screens display Al-driven analytics, shedding light on criminal networks and predictive policing. (Image/DALL-E 3)

NJ police warn that Al-generated story about fatal Christmas shooting is false

Asbury Park Press; December 28, 2023
Summary: An Al-generated news story falsely reported there was a fatal shooting on Christmas Day in Cumberland County, prompting police to put out a correction statement on social media. Read full article here: APP.com

The New York Times is suing OpenAl and Microsoft for copyright infringement

The Verge; December 27, 2023
A lawsuit claims OpenAl copied millions of Times' articles to train the language models that power ChatGPT and Microsoft Copilot.

Read full article here: theverge.com

Chief Justice Roberts casts a wary eye on artificial intelligence in the courts

NPR; January 1, 2024

Chief Justice John Roberts on Sunday turned his focus to the promise, and shortcomings, of artificial intelligence in the federal courts, in an annual report that made no mention of Supreme Court ethics or legal controversies involving Donald Trump.

Describing artificial intelligence as the "latest technological frontier," Roberts discussed the pros and cons of computer-generated content in the legal profession. His remarks come just a few days after the latest instance of Algenerated fake legal citations making their way into official court records, in a case involving ex-Trump lawyer Michael Cohen.

"Always a bad idea," Roberts wrote in his yearend report, noting that "any use of AI requires caution and humility."

Read full article here: npr.org

More information on Al lawsuits: techtarget.com



AI USED IN PUBLIC SAFETY AND CRIMINAL JUSTICE

Allows for more efficient allocation of policing

Identifies traffic violations and enforce road rules

Identifies the potential for an individual under criminal justice supervision to reoffend

Improves law
enforcement outcomes
by reducing timeconsuming tasks and
human error

Identifies areas of potential crimes such as fraud, money laundering, and terrorist financing

Provides accurate crime forecasting using predictive analytics to allocate police resources (Predictive Policing)

Crime detection via sound or cameras

Facial Recognition and Biometrics

Drones for Surveillance Emergency Apps

Sources: <u>National Institute</u>
of Justice, <u>Unite.ai</u>,
Police1.com



Section.4 Research and Resources

WEBSITES AND SOCIAL MEDIA

Websites:

- techcrunch.com
- MIT News
- Harvard.edu
- Al Weekly
- Wired.com
- Al Magazine
- Berkeley Al Intelligence Research (BAIR)
- ScienceDaily.com
- M Tech Post
- Google's Deep Mind

Social Media Accounts/Experts:

Geoffrey Hinton on X

Geoffrey is a cognitive psychologist and computer scientist. And as we mentioned earlier, he's also one of three "Godfathers of Al" and "Godfathers of Deep Learning" (next to Yoshua Bengio and Yann LeCun).

Andrew Ng on X

Founder & CEO of Landing AI, Founder of deeplearning.ai, Co-Chairman and Co-Founder of Coursera, and is currently an Adjunct Professor at Stanford University. He was also Chief Scientist at Baidu Inc., and Founder & Lead for the Google Brain Project.

Andrej Karpathy on X

A prominent AI researcher and engineer who led Tesla's Autopilot team for four years. A research scientist and a founding member at OpenAI

- Stanford HAI on X
- Berkeley Al Research on X
- MIT CSAIL on X

Companies and Developers:

- Open AI on X
- DeepLearning.Al on X
- Al at Meta on X

U.S. Government Websites:

- AI.GOV
- NIST.GOV
- DIGITAL.GOV
- COE.GSA.GOV

GOVERNMENT AND ACADEMIC REPORTS

National Artificial Intelligence Research and Development Strategic Plan - 2023 Update

Executive Office of the President of the United States; 2023

This document includes relevant text from the 2016 and 2019 national AI R&D strategic plans, along with updates prepared 2023 based Administration interagency and evaluation of the National Al R&D Strategic Plan: 2019 Update as well as community responses to a Request for Information on updating the Plan. The 2019 strategies were broadly determined to be valid going forward. The 2023 update adds a new Strategy 9, which establishes a principled and coordinated approach to international collaboration in Al research. Full report: whitehouse.gov

ChatGPT: The impact of Large Language Models on Law Enforcement

Europol; March 27, 2023

The objective of this report is to examine the outcomes of the dedicated expert workshops and to raise awareness of the impact LLMs can have on the work of the law enforcement community. As this type of technology is undergoing rapid progress, this document further provides a brief outlook of what may still be to come, and highlights a number of recommendations on what can be done now to better prepare for it. Full report: europol.eu

Facial Recognition Technology: Privacy and Accuracy Issues Related to Commercial Uses

United States Government Accountability Office; 2020

Facial recognition technology can verify or identify an individual from a facial image. Advocacy groups and others have raised privacy concerns related to private companies' use of the technology, as well as concerns that higher error rates among some demographic groups could lead to disparate treatment.

Full report: GAO

Malicious Uses and Abuses of Artificial Intelligence

Trend Micro Research; EUROPOL, etc.: December 2021

While AI and ML algorithms can bring enormous benefits to society, these technologies can also enable a range digital, physical, and political threats. Just as the World Wide Web brought a plethora of new types of crime to the fore and facilitated a range of more nontraditional ones, Al stands poised to do the same. In the continuous shift from analogue to digital, the potential for the malicious use of new technologies is also exposed. Hence, while this report looks at the present state of both AI and ML technologies, it also seeks to predict the possible ways criminals will exploit technologies in the future — a task that though seemingly daunting, paramount for the cybersecurity industry and law enforcement to undertake in the never-ending challenge to always stay one step ahead of criminals.

Full report: europol.eu

The Malicious Use of Artificial Intelligence: Forecasting, Prevention, and Mitigation

OpenAI, University of Oxford, etc.; 2018

Artificial intelligence and machine learning capabilities are growing at an unprecedented rate. These widely technologies have many beneficial applications, ranging from machine translation to medical image analysis. Countless more such applications are being developed and can be expected over the long term. Less attention has historically been paid to the ways in which artificial intelligence can be used maliciously. This report surveys the landscape of potential security threats malicious uses of artificial intelligence technologies, and proposes ways to better forecast, prevent, and mitigate these threats.

Full paper: arxiv.org





IN THE NEWS

Police Tech: Exploring the Opportunities and Fact-Checking the Criticisms

ITIF; January 9, 2023

Police tech could transform the way law enforcement operates, reducing crime and saving lives. Policymakers should focus on advancing adoption while enacting regulations to maximize the benefits and minimize the risks of police tech. Read the full article here: itif.org

Advancing policing through AI: Insights from the global law enforcement community

Police1; October 17, 2023

In a recent panel discussion titled "From Apprentice to Master: Artificial Intelligence and Policing," hosted by the International Association of Chiefs of Police in San Diego, California, law enforcement leaders from around the globe shared their insights on the emergence and integration of Artificial Intelligence (AI) in policing. One of the unequivocal conclusions from the discussion was that AI will be a gamechanger for law enforcement, transforming traditional intelligence-led policing through a gamut of technological advancements. The copious amount of data now available, coupled with cloud technology and open source tools, lays the groundwork for leveraging machine learning, large language models (LLMs), and soon, quantum technology, to enhance various facets of policing. Link to article: Police1.com

Clearview AI scraped 30 billion images from Facebook and other social media sites and gave them to cops: it puts everyone into a 'perpetual police lineup'

Business Insider; April 2, 2023

A controversial facial recognition database, used by police departments across the nation, was built in part with 30 billion photos the company scraped from Facebook and other social media users without their permission, the company's CEO recently admitted, creating what critics called a "perpetual police line-up," even for people who haven't done anything wrong. Read full article here: www.businessinsider.com

Section.5 Law Enforcement Considerations

LLMs

Agencies and officers may choose to utilize LLMs such as ChatGPT to assist with report writing, emails, and other tasks.

Consideration: 1) How the information inputted into LLMs is stored, shared, and used is still unknown. It can be assumed the information can be traced back to the user/officer and is not subject to complete privacy. Sensitive or classified information may not be protected from dissemination.

2) Answers and content created by the LLM is created by the public data it has access to therefore, generated answers can be bias, untrue, and not substantiated with facts and evidence, but formed by public opinions and fictional content.

Supporting Article: police1.com

BODY WORN CAMERAS

Video redaction and analytical software available to agencies uses AI operating systems to analyze, edit and find content in body worn camera video.

<u>Consideration:</u> 1) This technology has potential benefits to agencies by speeding up BWC and CCTV analysis and helping to identify specific encounters or entities within the footage. *Links: nij.ojp.gov*

2) It should be considered who has access to the footage and content uploaded into non-law enforcement owned and operated software for the purposes of redaction, storage, and data sharing.

PREDICTIVE POLICING

Predictive policing is the application of analytical techniques—particularly quantitative techniques—to identify likely targets for police intervention and prevent crime or solve past crimes by making statistical predictions. Consideration: 1) Some predictive policing techniques have been publicly criticized for being unethical or biased, disproportionately focusing on lowincome or minority neighborhoods. Therefore, claiming these areas are "over-policed" and subject to police "bias".

2) The predictions of an algorithm are only as good as the data the algorithm has. Consideration should be made that the information provided to agencies by predictive software is subject to interpretation and analysis.

Supporting Articles: <u>brookings.edu</u>; forbes.com

FACIAL RECOGNITION

A number of agencies use facial recognition AI software to identify individuals.

Consideration: 1) Facial recognition software has been challenged in court and in the public due to numerous claims of false arrests made with the help of the technology. In some of these cases, the facial recognition results provided to investigators was not corroborated with additional forms of evidence to ensure the individual being investigated was the same as the individual in the original photo. 2) Inaccurate use of facial recognition technology can affect multiple agencies, for example: an arrest warrant issued by one agency based on inaccurate facial recognition data leads another agency to arrest the individual via an National Crime Information Center warrant. Supporting Articles: The Hill;



Section.6 Meetings, Conventions, & Summits



PAST EVENTS

Al Safety Summit – Hosted by the UK Government

November 1-2, 2023

Bletchley Park, United Kingdom Link to website: Al Safety Summit

Summary: The Al Safety Summit brought together key countries, as well as leading technology organizations, academia and civil society to inform rapid national and international action at the frontier of AI development.

Outcome:

The creation of an international declaration aimed at tackling technology-related risks, along with a multinational pact for the assessment of advanced Al models. The international declaration was signed by over 25 countries and the EU, acknowledging the need to address AI development risks.

Source: aimagazine.com

Link to press release: <u>UK Gov News - Bletchley Declaration</u>

Link to The Bletchley Declaration: gov.uk

See Section.2 for more information

Meeting 10 - National Artificial Intelligence **Advisory Committee**

October 19, 2023 Washington, DC

Link to website: Al.gov

The primary purpose of the meeting was for the Committee to findings, identify actionable working group recommendations, and receive an update from the NAIAC Law Enforcement Subcommittee.

List of past events found here: Forbes

US AI Safety Institute (USAISI) Workshop on Collaboration to Enable Safe and Trustworthy Al

November 17, 2023 Washington, DC

Link to website: NIST.gov

The National Institute of Standards and Technology (NIST) hosted a hybrid workshop that explored measurement gaps in Al safety and trust and opportunities for collaboration to ensure the effective design, development, and deployment of Al systems that integrate considerations for AI safety and trust.

National Institute of Standards and Technology (NIST) Workshop

January 17, 2024

Link to website: NIST.gov

Al World Congress 2023

November 27-28, 2023

London, UK

Link to website: Al Conference London

The conference aimed to foster knowledge exchange, promote collaboration, and explore the transformative potential of AI in shaping our future. The conference offered various sessions on Al-related topics, including intelligent financial services, data governance, Al ethics, market trends, and digital healthcare.

The AI Summit New York

December 6-7, 2023 Manhattan, New York

Link to website: The AI Summit

"Taking place in the nexus of global commerce, the Al Summit New York is your chance to meet the ecosystem's pioneering tech authorities and get exclusive access to the business leaders driving them."

IIPCOMING EVENTS

Advantage DoD 2024: Defense Data & Al Symposium, hosted by the Chief Digital and Artificial Intelligence Office (CDAO)

February 20-22, 2024 Washington, DC

Link to website: NCSI.com

"We invite key data leaders and developers from government, industry, and academia to join us to discuss and build the future of cutting-edge data, analytics, and artificial intelligence (AI) — guiding the enablement of the U.S. military's enduring decision advantage."

Al Summit for the Americas

April 24-25, 2024

Montreal, Canada

Link to Website: Americas World Summit

"The world's leading Al summit for the Americas brings together the global AI ecosystem."

World Summit Al

October 9-10, 2024

Taets Art & Event Park, Amsterdam

Link to website: World Summit Al

"WSAI gathers the global AI ecosystem of Enterprise, Big Tech, Startups, Investors, Science and Academia to set the global Al agenda, every October in Amsterdam."



Section. 7 Key Takeaways

Google Maps experiments with generative AI to improve discovery. Elon Musk's AI start-up seeks to raise up to \$6 billion. (Section 1)

President Biden signed a landmark Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence. (Section 2)

The U.S. Office of Management and Budget (OMB) produced a memorandum establishing new agency requirements and guidance for AI governance, innovation, and risk management, including through specific minimum risk management practices for uses of AI that impact the rights and safety of the public. (Section 2)

The Bletchley Declaration on AI safety was signed by 28 countries from across the globe including Africa, the Middle East, and Asia, as well as the EU. (Section 2)

OpenAI has been hit with what appears to be the first defamation lawsuit responding to false information generated by ChatGPT. (Section 3)

Chief Justice Roberts casts a wary eye on artificial intelligence in the courts. (Section 3)

ChatGPT: The impact of Large Language Models on Law Enforcement (Section 4)

Policymakers should focus on advancing adoption while enacting regulations to maximize the benefits and minimize the risks of police tech. (Section 5)

Upcoming AI Events: Advantage DoD 2024 in Washington D.C.: Defense Data & AI Symposium, hosted by the Chief Digital and Artificial Intelligence Office (CDAO), AI Summit for the Americas in Montreal, World Summit AI in Amsterdam (Section 6)

Questions and concerns can be directed to:

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