



AI FOR ELECTED OFFICIALS

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About Me

- **30+ years of software development and cybersecurity experience**
- **Recovering software engineer**
- **BS in Information Systems from NKU**
- **Adjunct at Cincinnati State Technical and Community College and Gateway Community and Technical College**
- **25+ years of local government service: 8 terms on Fort Wright City Council, 3rd term Mayor of Fort Wright, Kentucky**



Agenda

- **Where are we?**
- **How did we get here?**
- **Threats**
- **Uses**
- **Demo**
- **Q&A**



**Never has a
technology
made us so
excited and
terrified at the
same time**

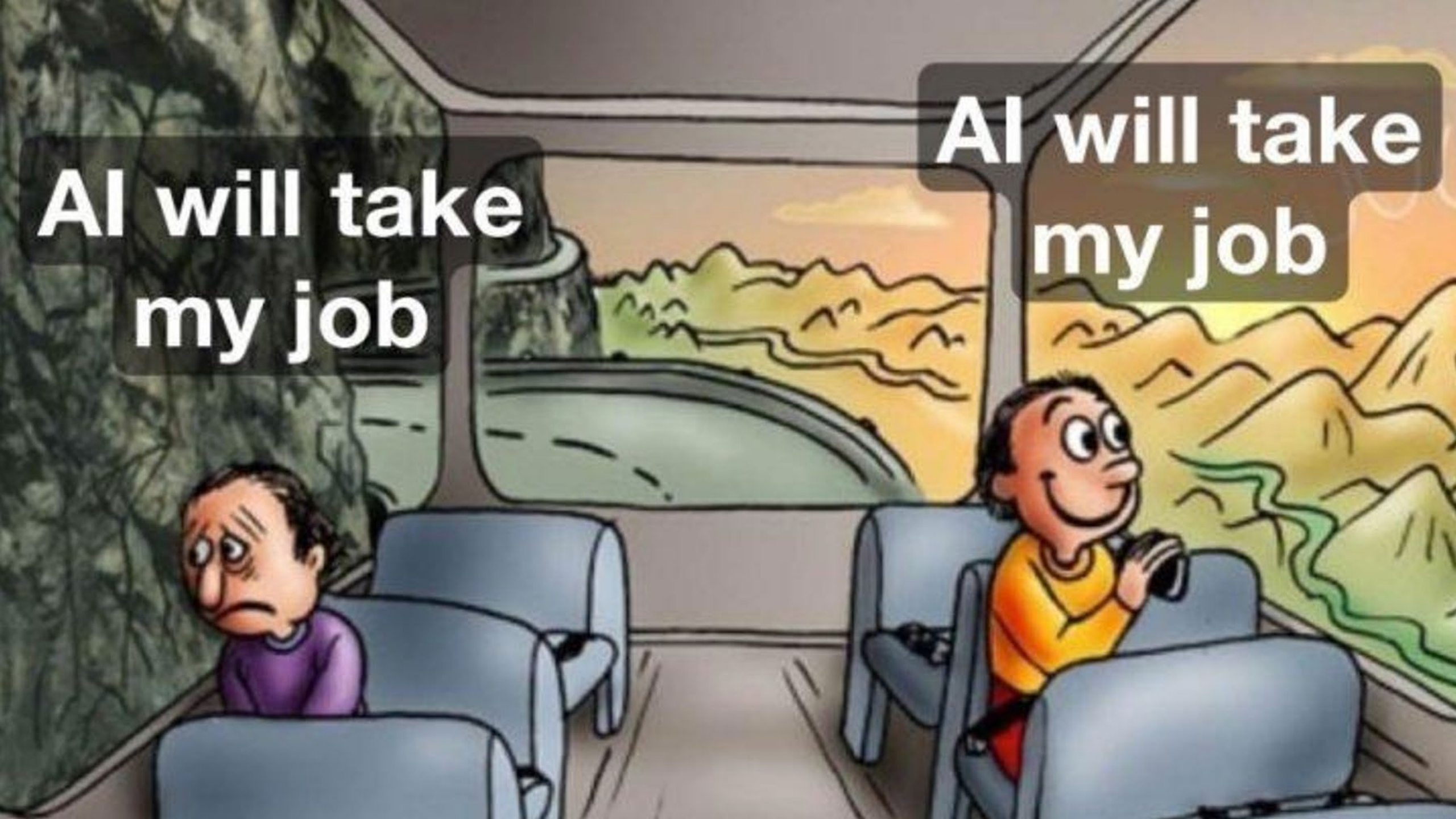


“Within a few decades, machine intelligence will surpass human intelligence, leading to The Singularity — technological change so rapid and profound it represents a rupture in the fabric of human history.” - Ray Kurzweil

“The development of full artificial intelligence could spell the end of the human race.” - Dr. Stephen Hawking

**AI will take
my job**

**AI will take
my job**





Intelligence

“The capacity for abstraction, logic, understanding, self-awareness, learning, emotional knowledge, reasoning, planning, creativity, critical thinking, and problem-solving. More generally, it can be described as the ability to perceive or infer information, and to retain it as knowledge to be applied towards adaptive behaviors within an environment or context.” - Wikipedia



Artificial Intelligence (AI)

“perceiving, synthesizing, and inferring information—demonstrated by machines, as opposed to intelligence displayed by humans or by others animals.

Example tasks in which this is done include speech recognition, computer vision, translation between (natural) languages, as well as other mappings of inputs.” - Wikipedia

1950

Turing Test

Alan Turing published his paper on "Computing Machinery and Intelligence" titled The Turing Test", a proposal that examined a machine's capacity to think like a human.

1955-56

Birth of AI

A proposal was generated by John McCarthy and his team for holding an "AI" workshop. After the workshop, the term artificial intelligence officially took birth in 1956.

1961

Unimate

In this year, a 1950s industrial robot Unimate, which was created by George Devol, emerged as the first to perform on New Jersey's General Motors assembly line.

1964

Eliza

A natural language processing computer program, was developed by MIT professor Joseph Weizenbaum and it engaged in conversations with humans.

1999

AIBO

Sony debuted AIBO (Artificial Intelligence Robot), which was designed for learning through interaction with its environment and human owners.

1998

Kismet

The expressive humanoid robot "Kismet" was built by MIT Professor Cynthia Breazeal. It's a robot that can detect and simulate emotions through its face.

1997

Deep Blue

This was the year when IBM's chess-playing computer Deep Blue, emerged as the first system to win against a reigning world chess champion

AI Winter

A period characterized by the low level of interest and funding in the AI field looms

1966

Shakey

This was the year that kickstarted the project of creating the first mobile robot, "Shakey". The project lasted from 1966 to 1972.

2002



Roomba

The popular Roomba was released by i-Robot, which was an autonomous robot vacuum cleaner that cleans while dodging hurdles.

2011



Watson

Two former Jeopardy! Champions Ken Jennings and Brad Rutter lost to IBM's Watson, a natural language question-answering computer in a televised game.

2011



Siri

Apple released Siri, a built-in, voice-controlled personal assistant, available for Apple users.

2014



Eugene

A computer algorithm claiming to be a 13-year-old boy called Eugene Goostman passed the Turing test, managing to convince 33% of the human judges at a Royal Society event that it was a human.

2018



BERT

Google developed BERT (Bidirectional Encoder Representations from Transformers). This technology allows anyone to train their own state-of-the-art question answering system.

2017



Dialog agents

Two "dialog agents" (chatbots) get trained by the Facebook AI Research lab (chatbots) to negotiate via machine learning, inventing their own communication language.

2016



Sophia

Hanson Robotics developed the humanoid robot Sophia pegged to be the first "robot citizen".

2014



Alexa

The legendary Alexa was released by Amazon, which is a home assistant that develops into smart speakers, functioning as a personal assistant.



2020

Open AI GPT-3

Open AI's GPT 3 was first introduced in May 2020 and was in beta testing in June 2020. This language model generates text by adopting algorithms that are pre-trained.



Artificial General Intelligence (AGI)

“a type of hypothetical intelligent agent. The AGI concept is that it can learn to accomplish any intellectual task that human beings or other animals can perform.

Alternatively, AGI has been defined as an autonomous system that surpasses human capabilities in the majority of economically valuable tasks.” - Wikipedia



Superintelligence

“a hypothetical agent that possesses intelligence far surpassing that of the brightest and most gifted human minds. "Superintelligence" may also refer to a property of problem-solving systems (e.g., superintelligent language translators or engineering assistants) whether or not these high-level intellectual competencies are embodied in agents that act in the world.” -

Wikipedia

We are here.

Narrow AI



2010-2015

Broad AI
(AI for Enterprise)



Today

General AI



2050 and beyond



The Economic Times

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Why we're unlikely to get artificial general intelligence anytime soon

Story by Cade Metz • 2d • ⌚ 9 min read

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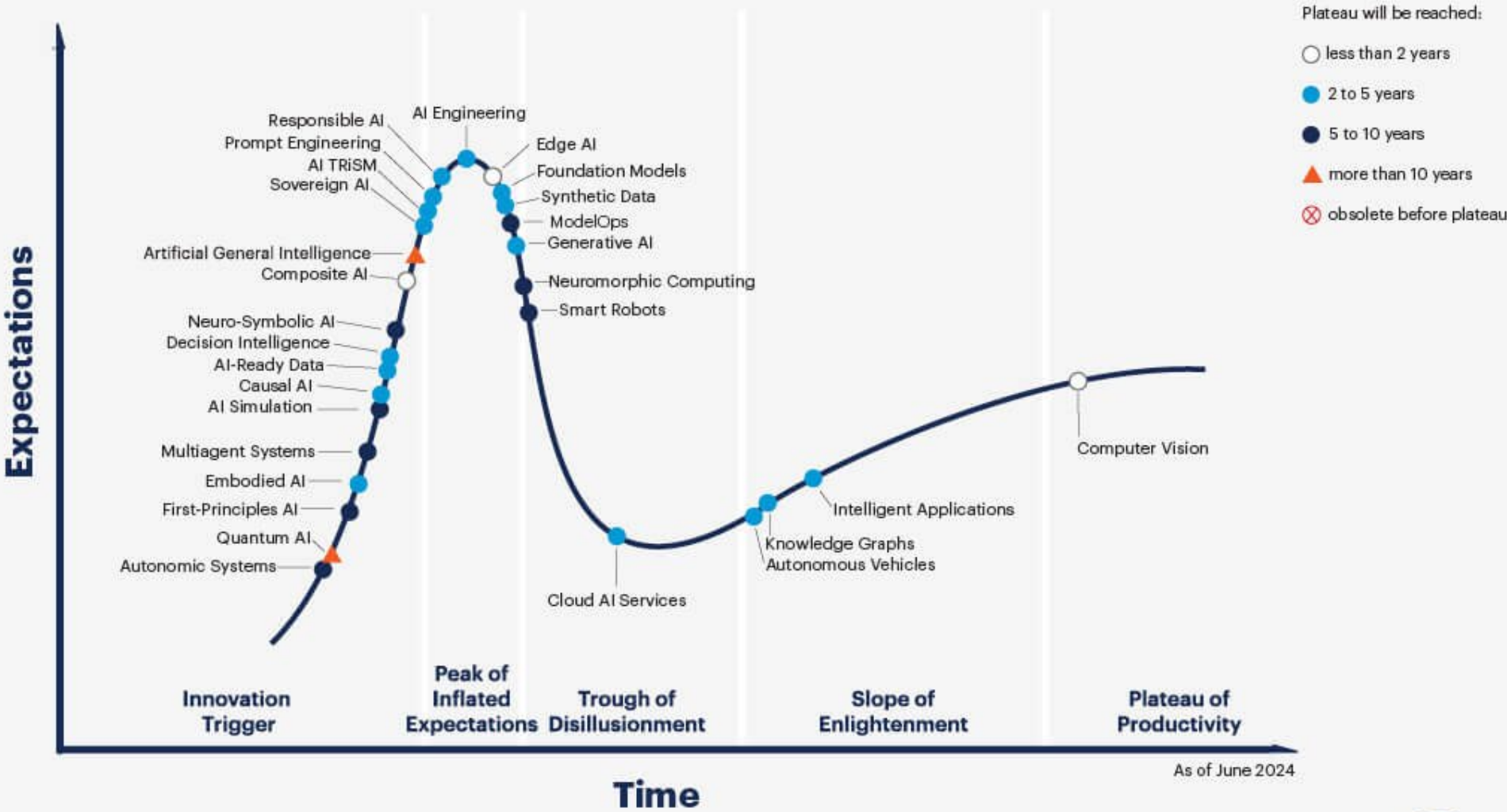
SENSEX ▼ -0.33%



Gold ↗ Rising fast



Hype Cycle for Artificial Intelligence, 2024



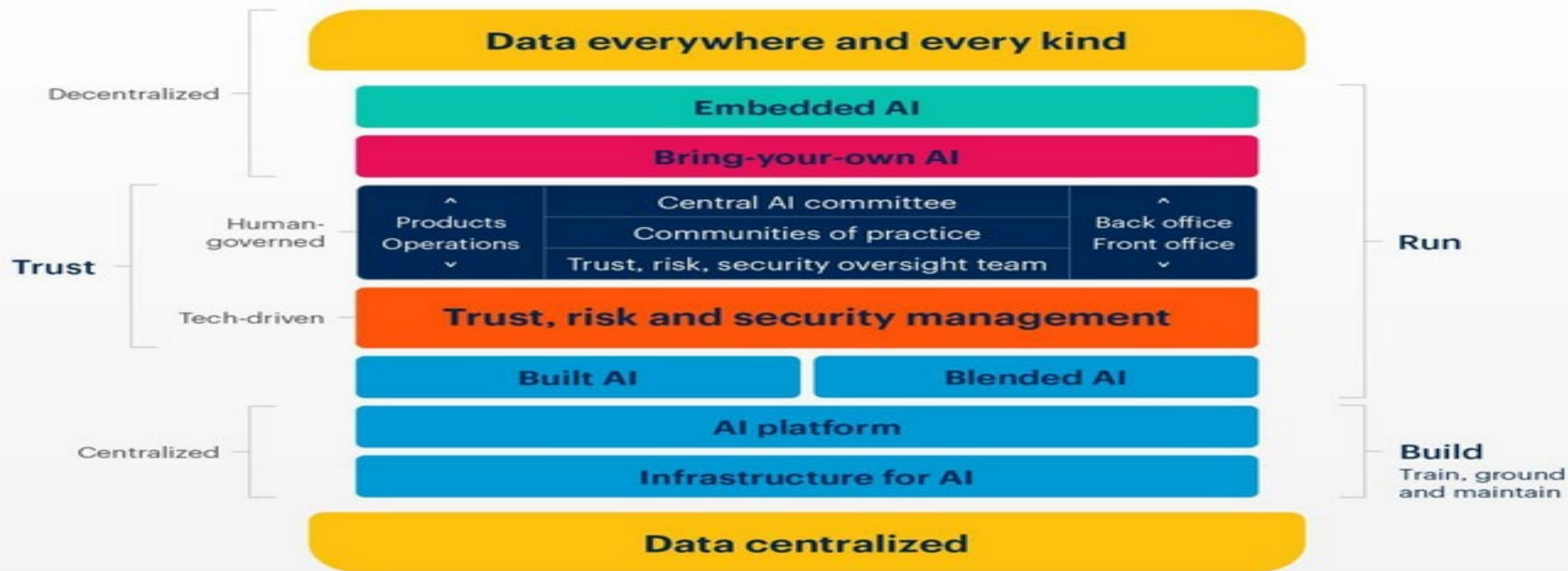
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Generative AI use cases by industry



AI technology sandwich

A conceptual framework for executing AI





AI Benefits

- **Productivity gains**
- **New capabilities**
- **Improved monitoring**
- **Reduction in human error**
- **Industry specific improvements**

AI Dangers



- **Job loss**
- **Disinformation**
- **Propaganda**
- **Bias**
- **Cybercrime**
- **Copyright**
- **Input Risk**
- **Output Risk**

Listen how AI can clone your voice, use it in phishing scams

Reporter's words recorded, then turned into the "Grandparent scam"



Scammers can now use AI to clone your voice, then make scam phishing phone calls to relatives. We find out how easily it can be done, and what it sounds like.



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YOUR MONEY**

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Don't Waste Your Money

Have a problem?

CULTURE

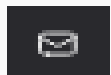
FBI warns AI hackers are impersonating US officials to infiltrate government

Malicious actors are using AI to target senior US officials with fake messages in a sophisticated smishing and vishing campaign.

Updated: May 16, 2025 04:52 PM EST



Aamir Kholam



2 days ago



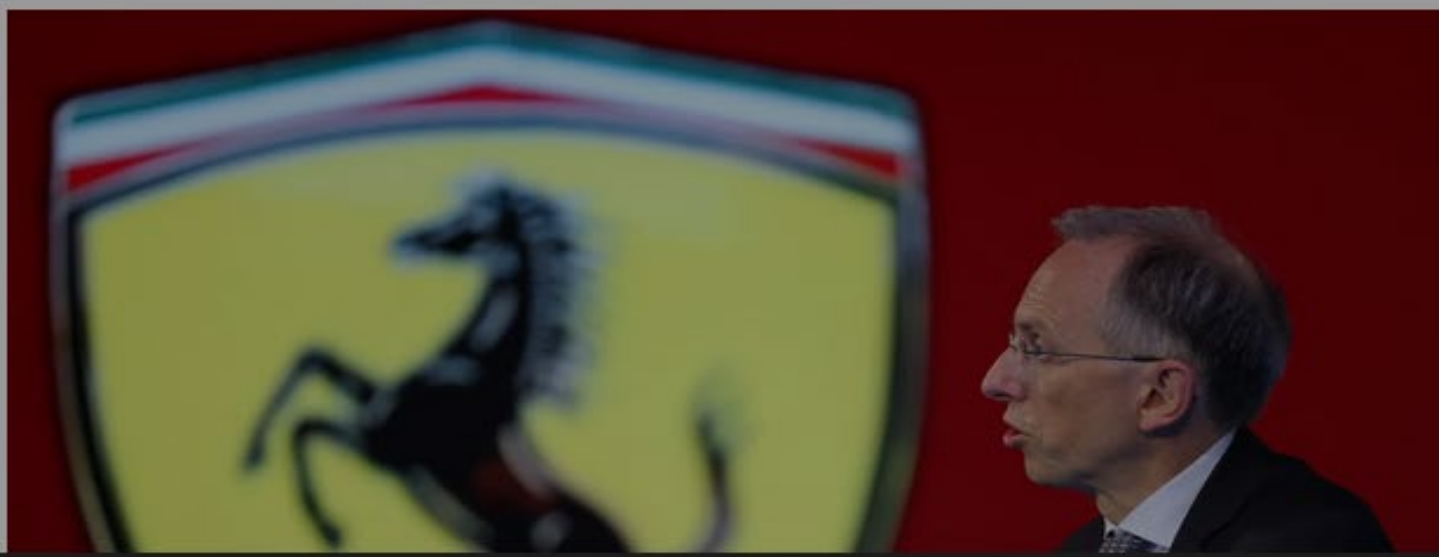
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The AI Race: [Microsoft's Balancing Act](#) | [New AI Billionaires](#) | [Monopolies](#) | [Google's AI Search Overhaul](#) | [AI Glossary](#) | [AI's Drain on Water](#)

Technology
Cybersecurity

'I Need to Identify You': How One Question Saved Ferrari From a Deepfake Scam

- Benedetto Vigna was impersonated on a call using AI software
- Large companies are being increasingly targeted with deepfakes





Generative AI (GAI)

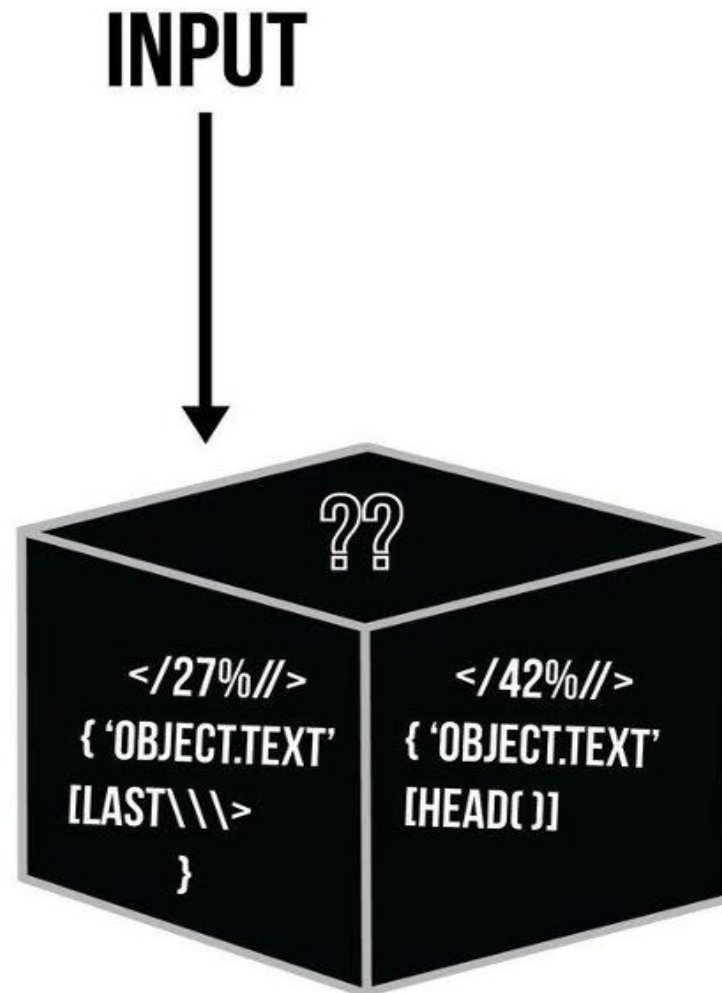
“is a type of artificial intelligence (AI) system capable of generating text, images, or other media in response to prompts. Generative AI models learn the patterns and structure of their input training data, and then generate new data that has similar characteristics.” - Wikipedia



Large Language Model (LLM)

“A large language model is a type of artificial intelligence (AI) algorithm that uses deep learning techniques and massively large data sets to understand, summarize, generate and predict new content. The term generative AI also is closely connected with LLMs, which are, in fact, a type of generative AI that has been specifically architected to help generate text-based content.” – WhatIs.com

It is a “Black Box”



BLACK BOX

THE BLACK BOX IS AN ALGORITHM THAT TAKES DATA AND TURNS IT INTO SOMETHING. THE ISSUE IS THAT BLACK BOXES OFTEN FIND PATTERNS WITHOUT BEING ABLE TO EXPLAIN THEIR METHODOLOGY.

→ OUTPUT



How it works

“For example, you could type into an LLM prompt window “For lunch today I ate....” The LLM could come back with “cereal,” or “rice,” or “steak tartare.” There’s no 100% right answer, but there is a probability based on the data already ingested in the model. The answer “cereal” might be the most probable answer based on existing data, so the LLM could complete the sentence with that word. But, because the LLM is a probability engine, it assigns a percentage to each possible answer. Cereal might occur 50% of the time, “rice” could be the answer 20% of the time, steak tartare .005% of the time.” – ComputerWorld



General GAI Types

- **Text**
- **Audio**
- **Video**
- **Photo**



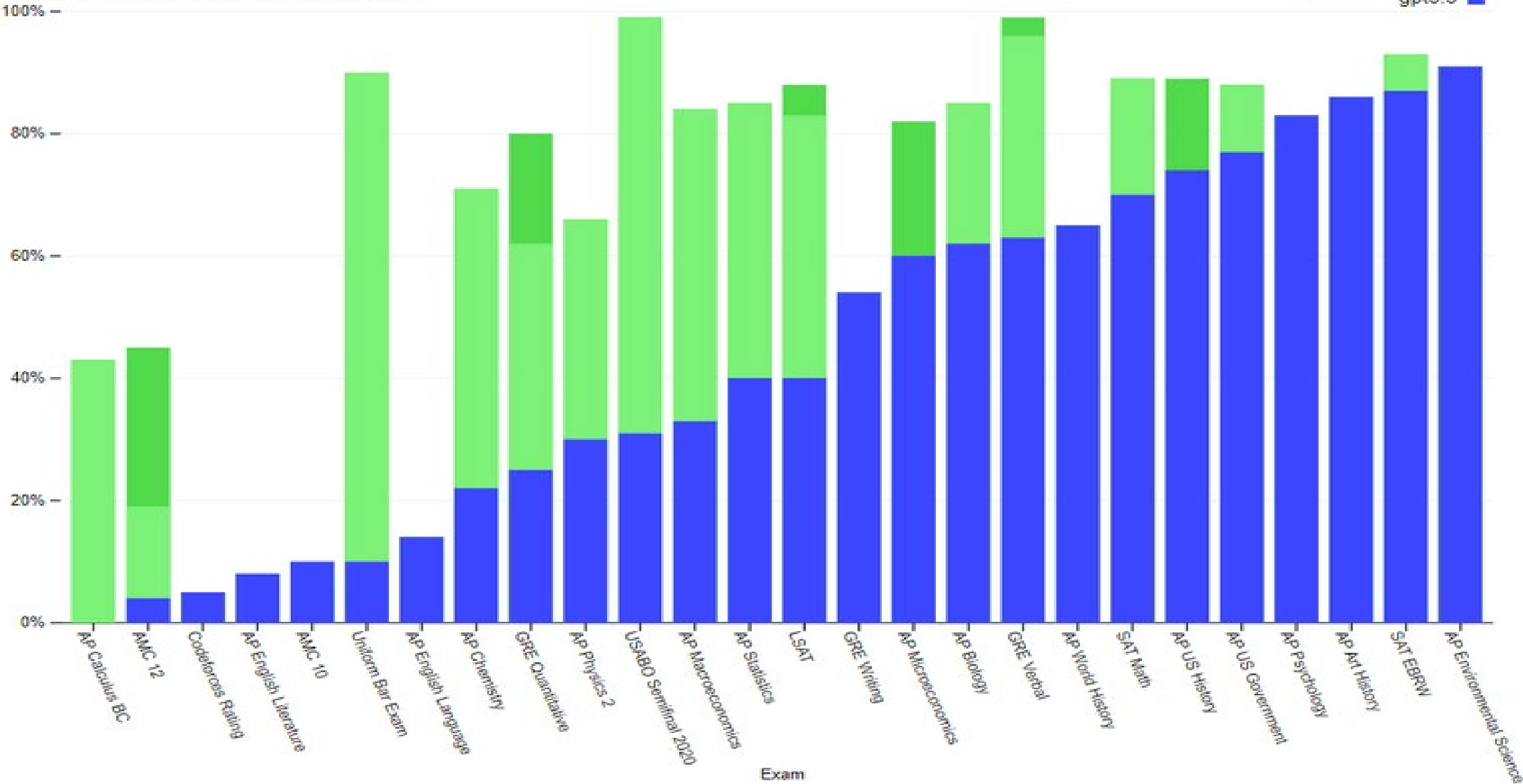
Chat GPT Timeline

- **GPT = Generative Pre-trained Transformer**
- **2015: Founded as a non-profit with \$1Billion pledged**
 - CEO: Sam Altman
 - Notable investors include Elon Musk, Peter Thiel, and Amazon Web Services
- **2018: Musk resigned from the board, but remained a donor**
- **2019: Transitioned to a “capped” for-profit to attract/retain talent**
 - Microsoft invested \$1Billion
 - Announced its intention to commercially license its technologies
 - The non-profit entity is the sole controlling shareholder of the for-profit entity
- **2020: Announced GPT-3 and the API**
- **2021: Introduced DALL-E, an image generating AI**
- **November 2022: Launched free preview of ChatGPT 3.5**
 - Achieved over a million sign ups in the first 5 days
- **January 2023: Microsoft announced commitment of \$10 Billion**
 - Estimated 100 million daily users
 - Investment valued the company at \$29 Billion
 - Forecast \$200M in revenue in 2023, \$1B+ in 2024
- **February 2023: Microsoft announces it's building ChatGPT in**
- **ChatGPT 4 released March 14th, 2023**

Exam results (ordered by GPT-3.5 performance)

Estimated percentile lower bound (among test takers)

gpt-4
gpt-4 (no vision)
gpt3.5





Copilot, Grok and Gemini

- **Grok: X product**
- **Gemini: Google product**
- **Copilot: Microsoft**



What can you do with GenAI

- **Generate ideas**
- **Understand complex topics**
- **Generate content**
- **Summarize data**
- **Get coding assistance**
- **Translate text**
- **Write a book**
- **Find data sets**
- **Advance in your career**



How Intrust Uses AI

- **Writing**
- **Idea Generation**
- **Automation**
 - Call dispatching
 - Code generation
 - Autoresponder
 - Intrust Man
 - Call resolution
 - Augment Robotic Process Automation (RPA)

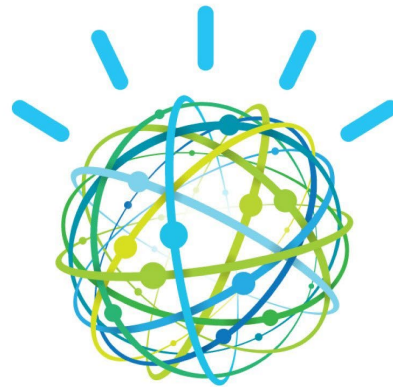
AI Utilized by Intrust IT



ChatGPT

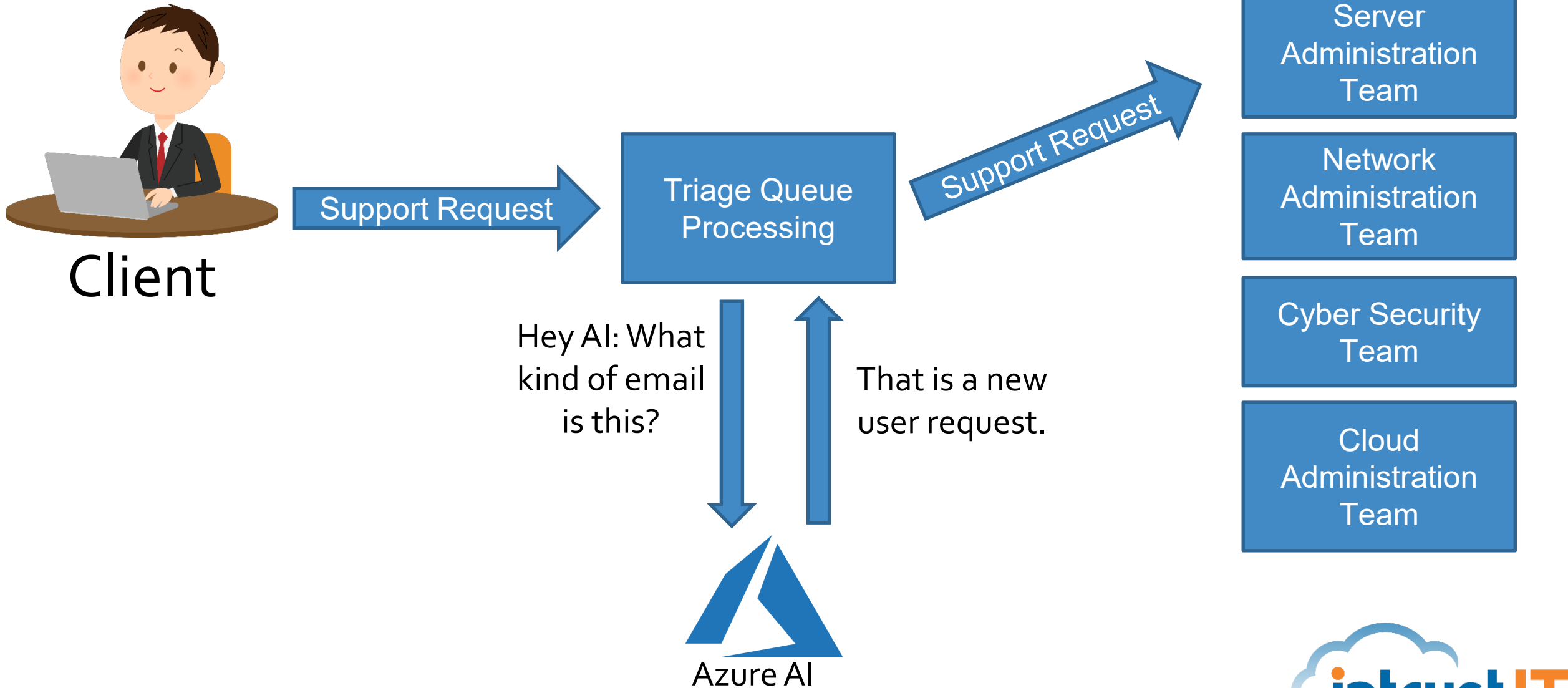


Microsoft AI



IBM Watson™

AI Enabled Workflow



AI sets Ticket Priority

...

Intrust Man
1/30/2024 2:32 PM

IM

Determined Priority: 2

Reasoning: The user has reported a potential security incident involving phishing.

...

Intrust Man
1/29/2024 2:21 PM

IM

Determined Priority: 3

Reasoning: The user Dixie Wolf has facing an issue where SendSafely emails sent to DPS and Jefferson Twp are blocked and cannot be opened. This issue seems to be affecting this user individually.

...

Intrust Man
1/14/2024 8:40 PM

IM

Determined Priority: 4

Reasoning: The user, Tim, is requesting a change to the Microsoft Teams setting from "Public" to "Organizational Wide". This requires Global Admin access.

AI Determines Work Type

...

Internal

Intrust Man

1/25/2024 4:10 PM

IM

AI Work Type Assessment: Server/M365

Explanation: The ticket concerns setting up a direct number for a user in Microsoft Teams Voice and updating contact details in Active Directory. Since both Teams Voice and AD are related to server/cloud infrastructure or applications, specifically under Microsoft 365 management, it fits into the 'Server/M365' work type.

...

Intrust Man

1/30/2024 2:41 PM

IM

AI Work Type Assessment: Security

Explanation: This ticket has been classified with a Security work type because it pertains to a reported phishing attempt. The ticket summary directly mentions 'Suspected Phish', which clearly aligns with the examples provided under the Security work type, such as 'Phishing or Spam response'.



AI Assigns Ticket

...

Internal

Intrust Man

1/25/2024 4:11 PM

IM

Internal team identified. Processing ticket 2646337

Rob Sibert has fewest tickets in the assignment pool at 29 tickets.
Assigning Rob Sibert to ticket 2646337



AI Reviews Closed Tickets

...

Internal

Intrust Man

1/30/2024 10:17 AM

IM

Survey: Ticket meets all Intrust standards.

*This is an “Expert System” and doesn’t use generative AI.

Surfacing Relevant Knowledge

Support Ticket Database

Internal Knowledgebase

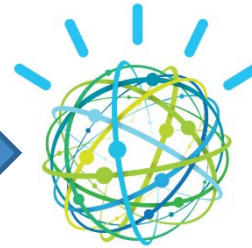
Microsoft Teams

Network Documentation



Private Data Lake

IBM Watson™



External Knowledge Sources

Configs 22 results Cisco Umbrella DNS / Web Filter 10/27/2020 Source: ConnectWise Company: Nakatomi Trading Co. Umbrella - GM Advisory Group 02/11/2021 Source: ConnectWise Company: Nakatomi Trading Co. Umbrella - JBS 10/24/2019 Source: ConnectWise Company: JBS LTD	Documents 4 results Cisco VPN 04/10/2023 Source: Web Content Company: All Solution to Cisco VPN Issues 01/19/2023 Source: Web Content Company: All Cisco VPN FAQs 11/26/2023 Source: Confluence Cloud Company: Mitch and Murray Cisco VPN Issue
Tickets 20 results [1152818] Unable to get into cisco anyconnect 03/26/2021 Source: ConnectWise Company: Lencore Acoustics Corp. [1942887] Issues with Cisco VPN Client 11/07/2023 Source: ConnectWise Company: Mitch and Murray	Public 20 results Cisco HyperFlex & Veeam CDP support status 02/01/2021 Source: Bug Zero Company: Veeam WiFi Stop working after logout from Cisco AnyConnect VPN 01/17/2022 Source: Bug Zero Company: Red Hat

Critical Ticket Monitoring

Your critical ticket hasn't had an update in 30 mins. Do you have an update for the client?

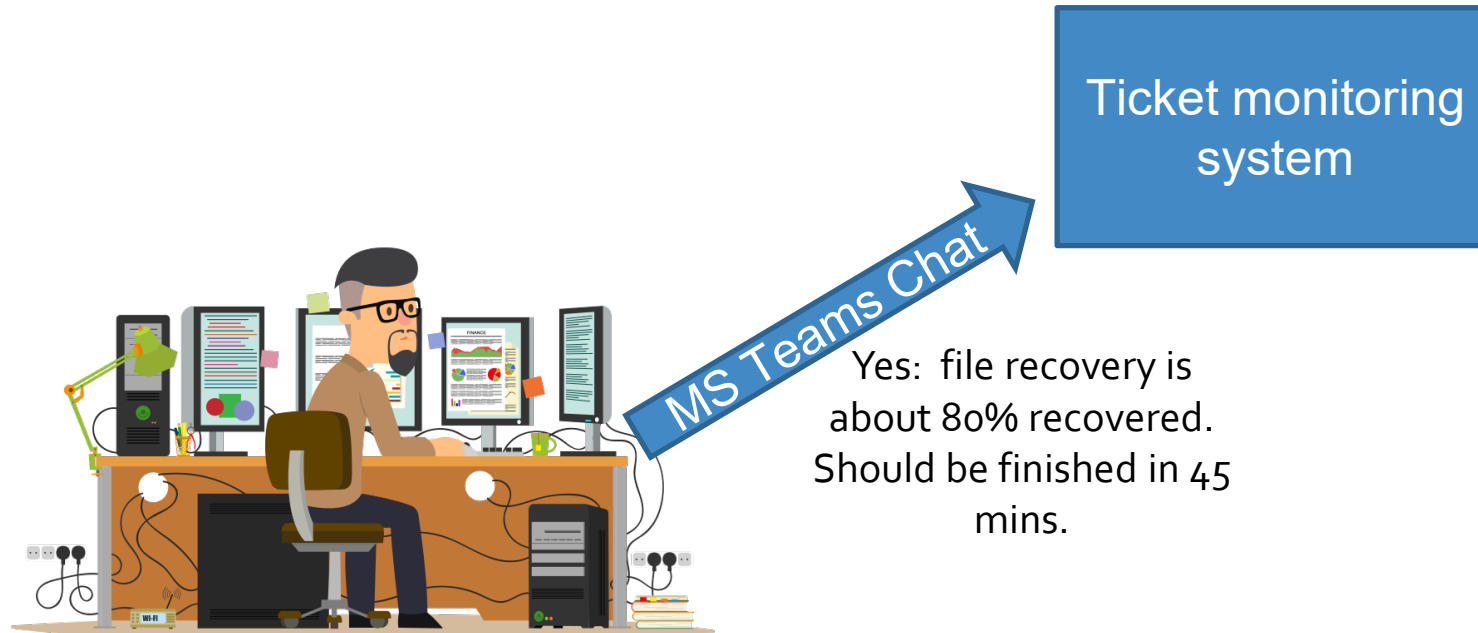
Ticket monitoring system

MS Teams Chat



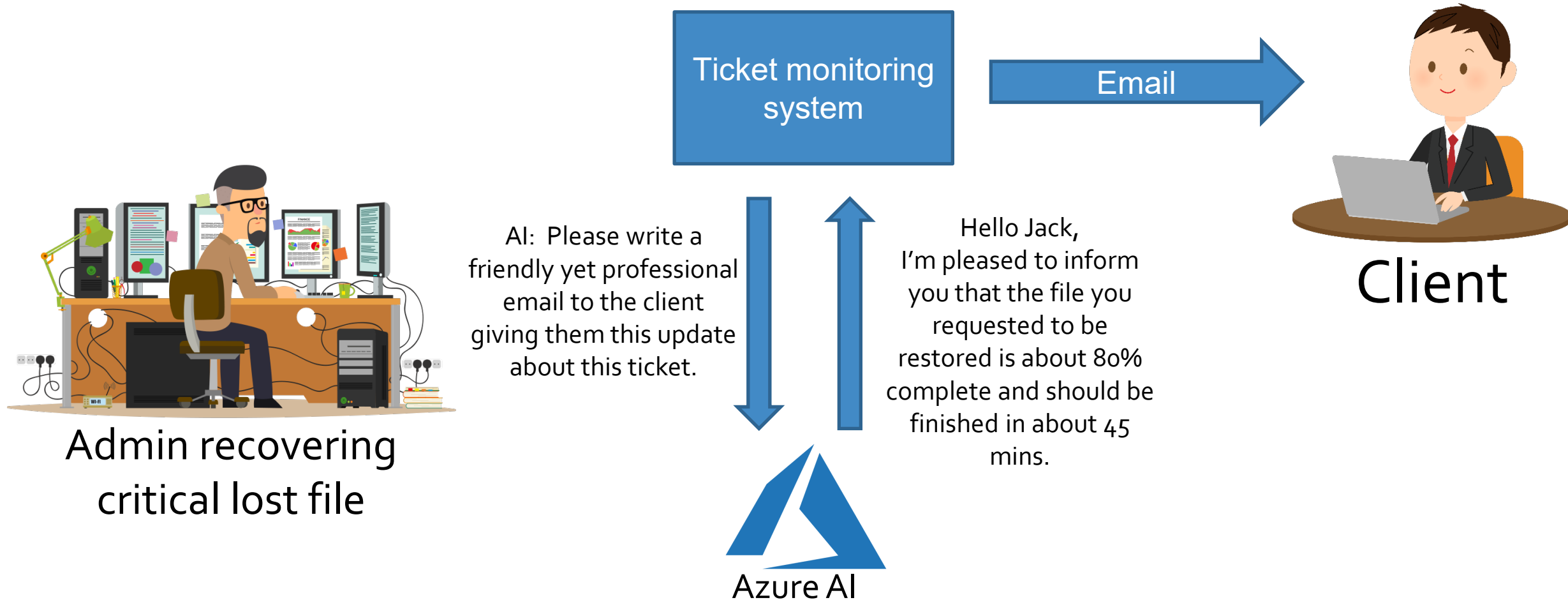
Admin recovering critical lost file

Critical Ticket Monitoring



Admin recovering critical lost file

Critical Ticket Monitoring





How can Government Leverage AI?

- **Automating Administrative Tasks**
- **Enhancing Public Safety**
- **Improving Communication with Citizens**
- **Optimizing Resource Allocation**
- **Enhancing Public Services**



Local Government Examples

San Jose, California: AI for Traffic Safety

- **San Jose is implementing AI and computer vision technologies to enhance traffic safety. Cameras mounted on city vehicles detect road obstructions, hazards, and other issues in real-time, enabling proactive maintenance and enforcement.**



Local Government Examples

Düsseldorf, Germany: AI for Fire Station Placement

- The Düsseldorf Fire Department, in partnership with Google, uses AI to analyze maps and data to determine optimal locations for new fire and rescue stations. The objective is to ensure emergency responders can reach any address within six minutes.



Local Government Examples

Los Angeles, California: AI for Bus Lane Enforcement

- LA Metro has deployed an AI-enabled pilot program on its buses to detect and issue citations to vehicles illegally blocking bus lanes. In the first two months, the system issued nearly 10,000 citations, proving its effectiveness.



Local Government Examples

Maryland: AI for Benefits Eligibility

- **Maryland has introduced the Unified Benefits Screener, an AI-powered, mobile-friendly tool that helps residents determine their eligibility for programs like Medicaid, SNAP, WIC, and home energy assistance in a matter of minutes.**



Local Government Examples

Richmond and Wandsworth, UK: AI for Resident Engagement

- **The Richmond and Wandsworth councils are employing AI, including voice AI technology, to improve public services and engage with residents. This includes handling inquiries and service requests more efficiently through automated systems.**

THERE'S AN AI FOR THAT^{®*}

36,009 AI tools for 13,638 tasks and 4,993 jobs

Spotlight: Voice to Notion (Notion assistance)

Enter a task...



#1 website for AI tools. Used by 50M+ humans.



Generate images



Free tools

▼ **Latest**

For You



Trending



Remember...

- **Use for general research and non-proprietary ideation**
- **Do not provide personal information of customers or employees**
- **Do not provide any proprietary data**
- **AI can “hallucinate” and confidently provide wrong answers**
- **AI can plagiarize**
- **To carefully output / output risk**



C.R.E.A.T.E Process

- **Context:** Give ChatGPT clear and concise context
- **Result:** Tell it what you want it to produce for you
- **Explain:** Give it more details
- **Audience:** Tell it who you are making the content for
- **Tone:** If necessary, add a speaking tone to spice up the output
- **Expand:** Expand, elaborate and edit



Demos

Scary Smart

The Future of Artificial Intelligence
and How You Can Save Our World

'An
enlightening
education in
how to be
human.'
Elizabeth
Day



Mo Gawdat

Former Chief Business Officer Google [X]
and bestselling author of *Solve for Happy*

...
NICK BOSTROM

SUPERINTELLIGENCE

Paths, Dangers, Strategies





Additional Resources

- <https://openai.com/>
- <https://twitter.com/i/grok>
- <https://www.microsoft.com/en-us/microsoft-copilot>
- <https://www.zdnet.com/article/best-ai-chatbot/>
- <https://www.forbes.com/sites/bernardmarr/2023/02/28/beyond-chatgpt-14-mind-blowing-ai-tools-everyone-should-be-trying-out-now/?sh=1451240e7a1b>
- <https://www.techradar.com/news/what-is-ai-everything-you-need-to-know>
- <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-ai>
- <https://news.yahoo.com/superintelligence-ai-could-replace-humans-084735136.html>
- <https://www.pcmag.com/how-to/ai-on-the-go-how-to-use-chatgpt-from-your-mobile-device>
- <https://www.pcmag.com/news/chatgpt-adding-bing-as-its-default-search-experience>
- https://www.amazon.com/Superintelligence-Dangers-Strategies-Nick-Bostrom/dp/1501227742/ref=asc_df_1501227742
- https://blog.hubspot.com/marketing/write-ai-prompts?utm_content=258981933&utm_medium=social&utm_source=facebook&hss_channel=fbp-756028847925927
- www.kitboga.com

Q&A



“Success in creating effective AI, could be the biggest event in the history of our civilization. Or the worst. We just don’t know. So, we cannot know if we will be infinitely helped by AI, or ignored by it and side-lined, or conceivably destroyed by it.” - Dr. Stephen Hawking



Thank You!

Dave Hatter, CISSP, CISA, CISM, CCSP, CSSLP, PMP, ITIL

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Get our checklist:

<https://www.intrust-it.com/cyber-security/cyber-essentials-checklist>

ASK ABOUT OUR NO-COST, NO-OBLIGATION ASSESSMENT

- Catch Tech Friday live on 55KRC at 6:30 AM every Friday on 550 AM or <http://55krc.iheart.com>
- Catch Cyber Monday live on WTVG at 6:30 AM and Tech Support at 9:00 AM every Monday on 13 ABC or <https://www.13abc.com/>



Intrust At A Glance



**Serving Clients
Since 1992**



**Customer Satisfaction
Rating of >99% Since 2016**



Over 90% Answer Rate



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Supported**



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Cybersecurity Protection**



Over 10,000 Devices Managed



**1% of Profit Donated to
Charitable Organizations**



**By Cincinnati Business Courier,
Ohio Business, & Inc. Magazine**



Over 100 Certifications

