

# VEROAI

## The Bottomline on AI in Hiring: Is it Effective, Legal, and Fair?

Eric Sydell, Ph.D.

July 25, 2023



TL;DR

Maybe

VEROAI

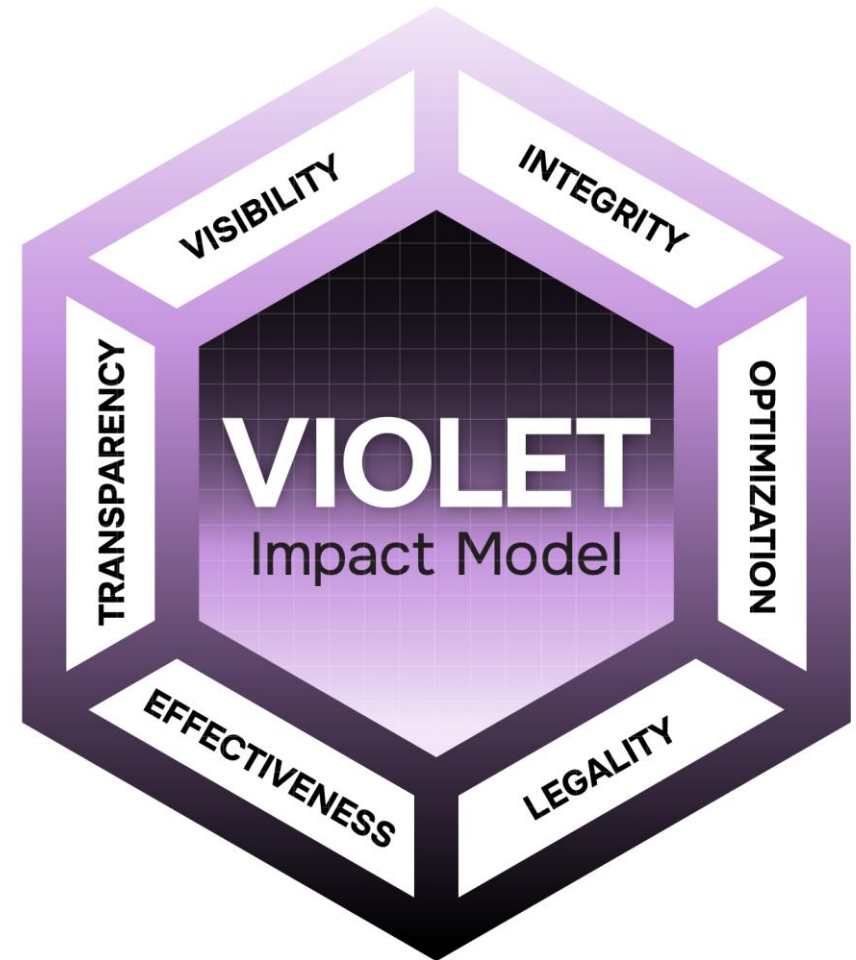
# Who am I? What is Vero AI?

## Eric Sydell

- IO psychologist, cofounder of Shaker/Modern Hire and Vero AI

## Vero AI

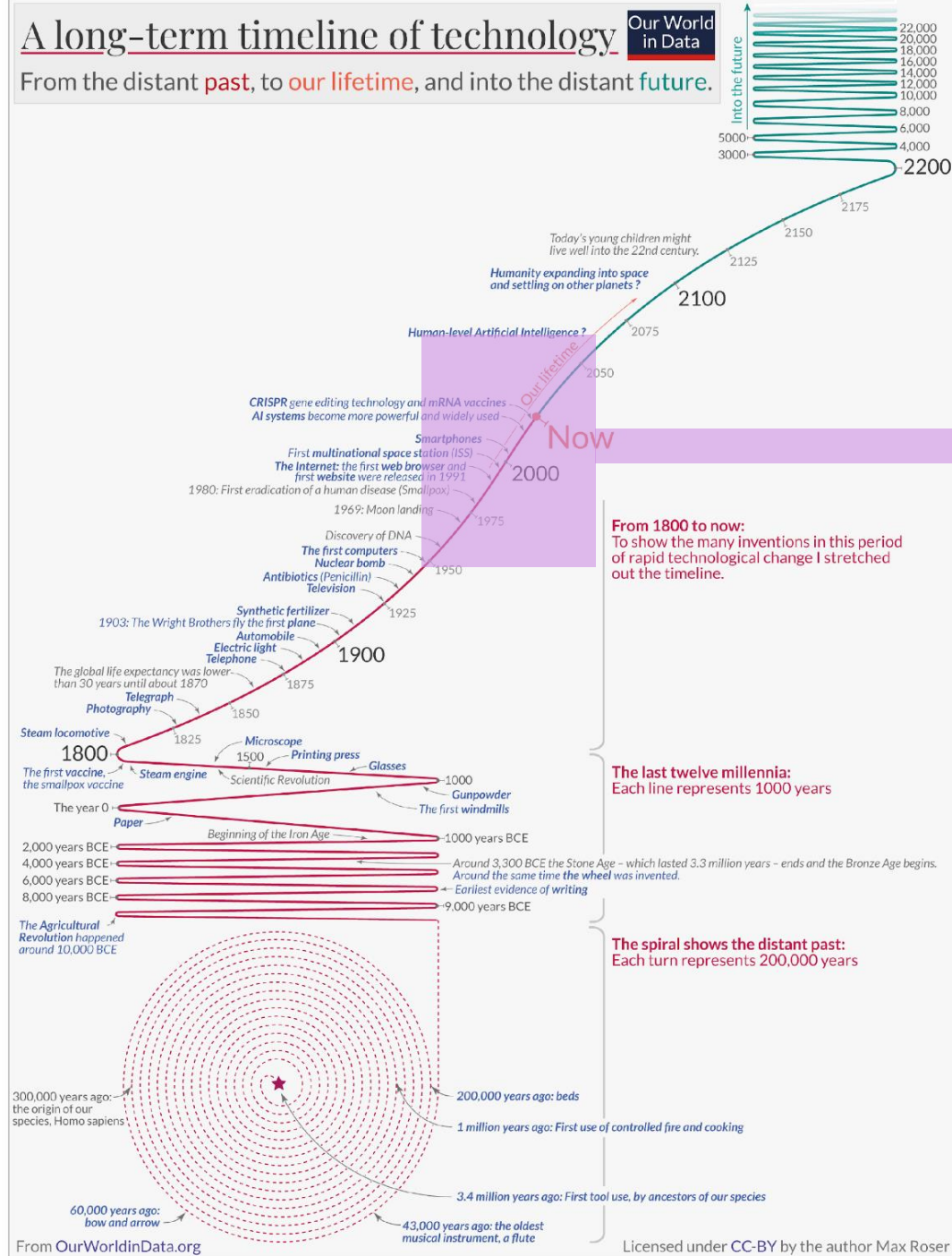
- New firm designed to objectively evaluate algorithms
- Goal is to deploy scaled scientific solutions
- Working to get beyond hype, to show objective truth



# A long-term timeline of technology

Our World in Data

From the distant past, to our lifetime, and into the distant future.



In the 4 million years covered by this timeline, our lives are in the steepest part.

**From 1800 to now:**  
To show the many inventions in this period of rapid technological change I stretched out the timeline.

**The last twelve millennia:**  
Each line represents 1000 years

**The spiral shows the distant past:**  
Each turn represents 200,000 years

# Explosive Growth of Generative AI

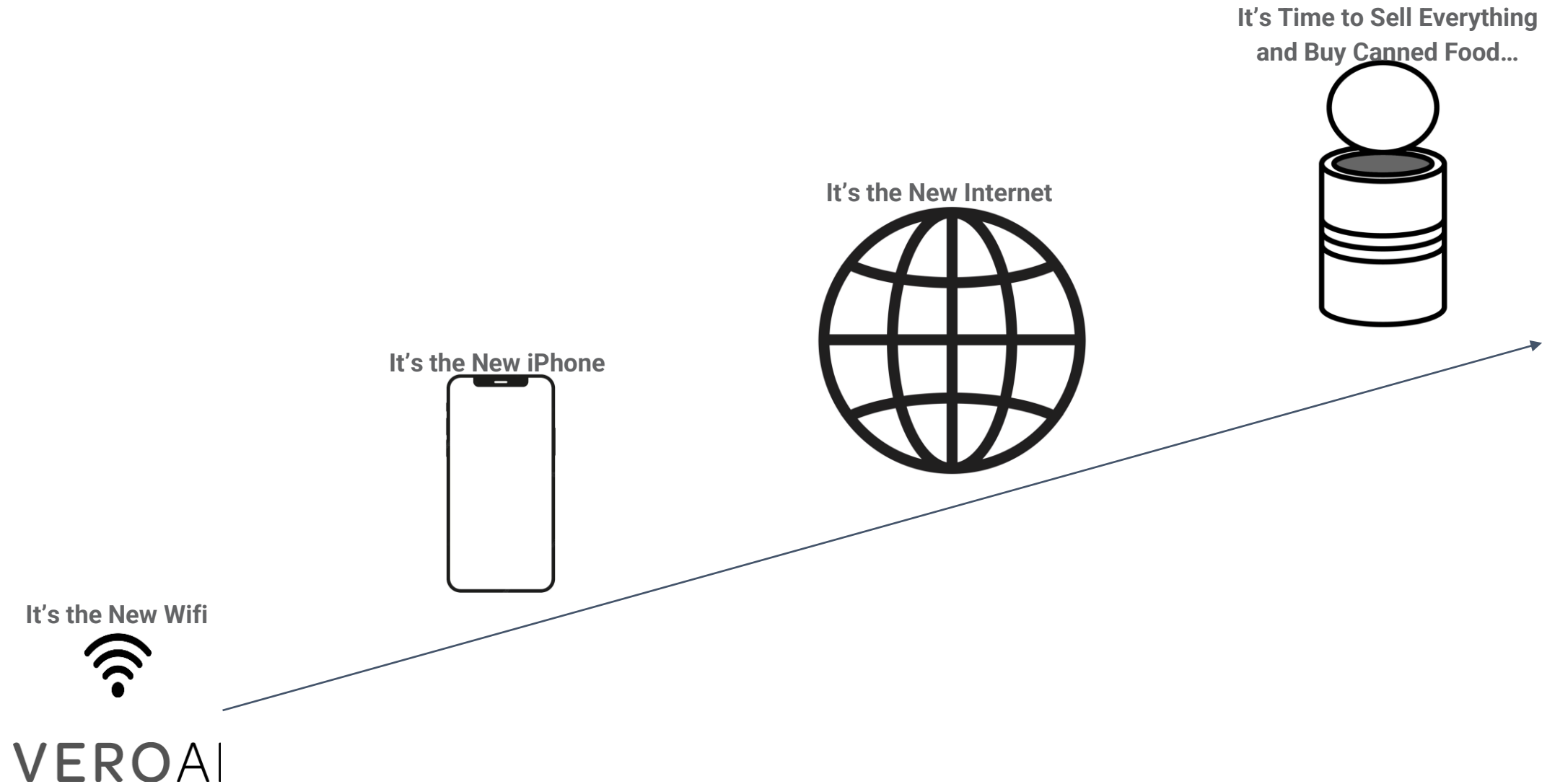
## Time it took to reach 100 million monthly users:



Source: UBS

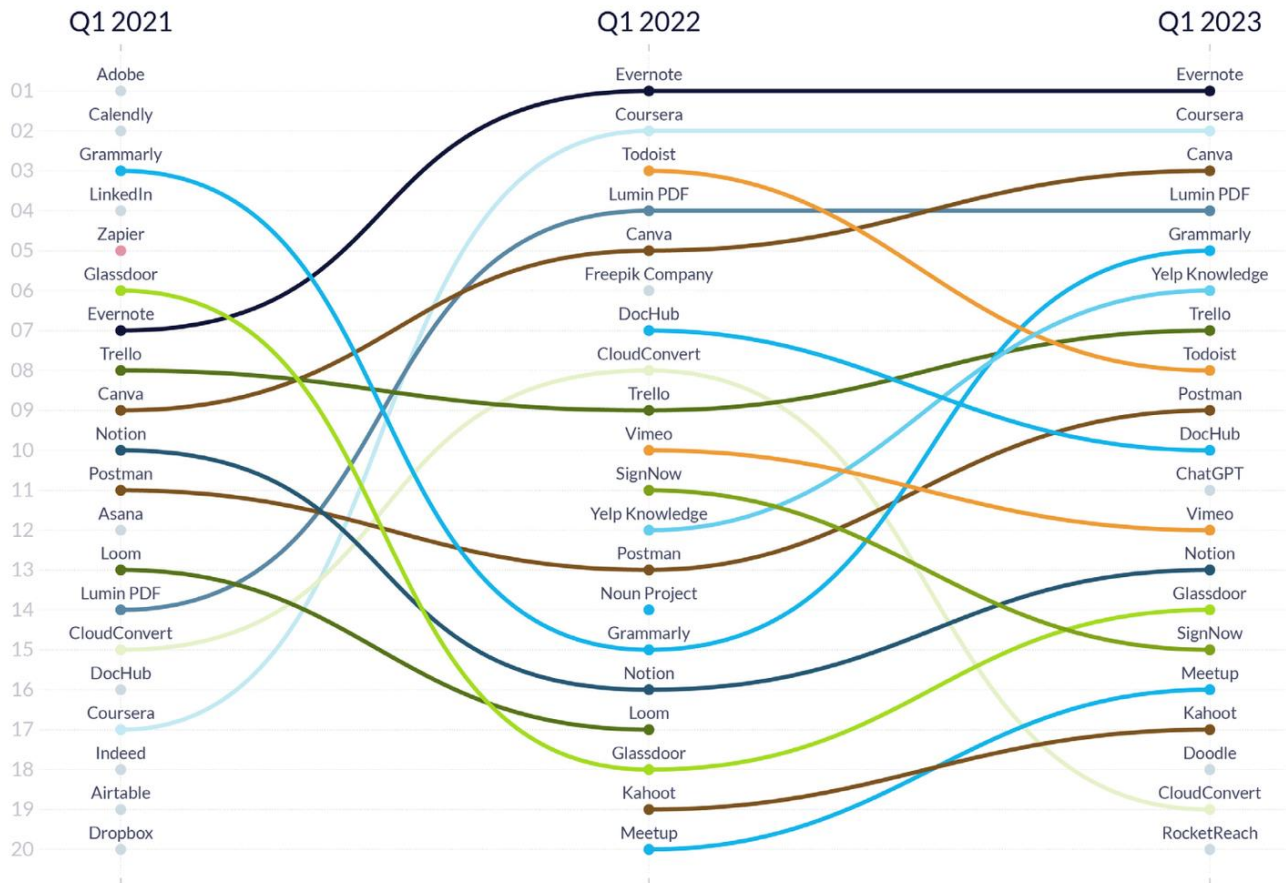
@TheRundownAI 

# How Big a Change is Gen AI Really?





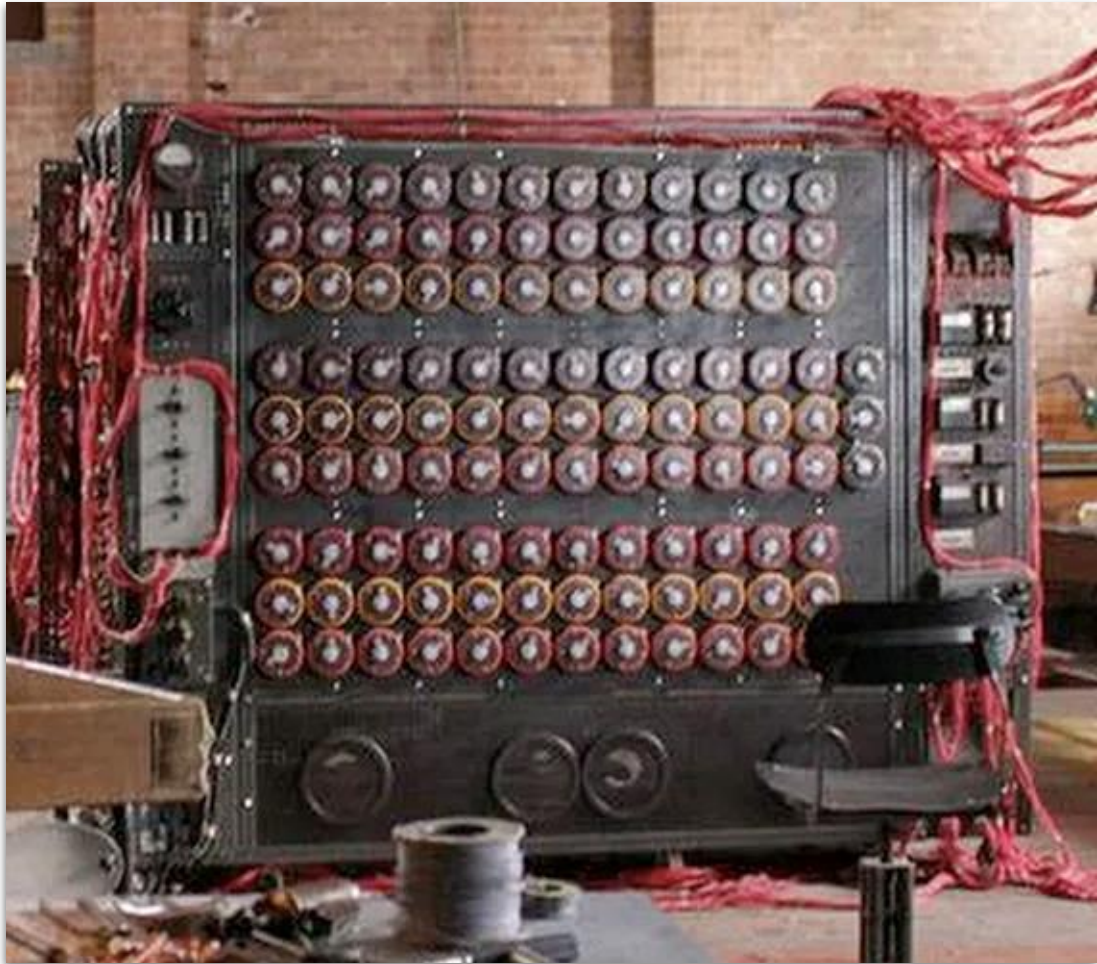
# Who Are the Users of Gen AI Today and What are They Doing?



‘Shadow IT’ - the tools employees use without IT’s blessing because it makes their jobs easier

# A Small History of Big Technological Moments

1940's Military Computers (100's)



1960's Enterprise Mainframes (1,000s)

**150 Extra Engineers**

An IBM Electronic Calculator speeds through thousands of intricate computations so quickly that on many complex problems it's just like having 150 EXTRA Engineers.

No longer must valuable engineering personnel . . . now in critical shortage . . . spend priceless creative time at routine repetitive figuring.

Thousands of IBM Electronic Business Machines . . . vital to our nation's defense . . . are at work for science, industry, and the armed forces, in laboratories, factories, and offices, helping to meet urgent demands for greater production.

**IBM** INTERNATIONAL BUSINESS MACHINES



# A Small History of Big Technological Moments Continued...

1980's Small Business Computers (Millions)



**SDS-100 THE ULTIMATE SMALL BUSINESS COMPUTER**

The SDS-100 is pure computing power... designed strictly for small business and professional applications. The proven SD Systems computer boards give you reliability, unequalled flexibility and performance through standard software programs. The system is packaged in a totally shielded single case, housing two full-size dual-sided floppy disk drives, a full sized 12" video monitor, the keyboard and the SDS-100 computer power.

For the more technical features: ● 32K Random Access Memory (Expandable to 64K on board) ● 1,025,024 Bytes of on line disk storage ● IBM

3740 Compatible 12-inch Video monitor reading 80 characters by 24 lines ● Numeric accounting and statistical keyboard ● Full cursor control keys ● Parallel and Serial (RS-232) input and output ports ● C/P/M Operating System (by Digital Research of Pacific Grove, California).

The SDS-100 is available through your local SD Dealer. The price of the SDS-100 is \$5,795.00 FOB Dallas, Texas. For information concerning the location of your nearest dealer call toll free, 800-527-3460 or 800-527-2304.

**SDS SD Systems** CIRCLE INQUIRY NO. 45

P.O. Box 288110 • Dallas, Texas 75228 • TELEX 73 0151 SD BALKS COMPANY 214-271-4667 • 800-527-2304 • 800-527-3460

1990's Home Computers (Hundreds of Millions)



# Now? The First Users are Individuals...

2000's Smartphones (Billions)




2020's ChatGPT (A Lot)

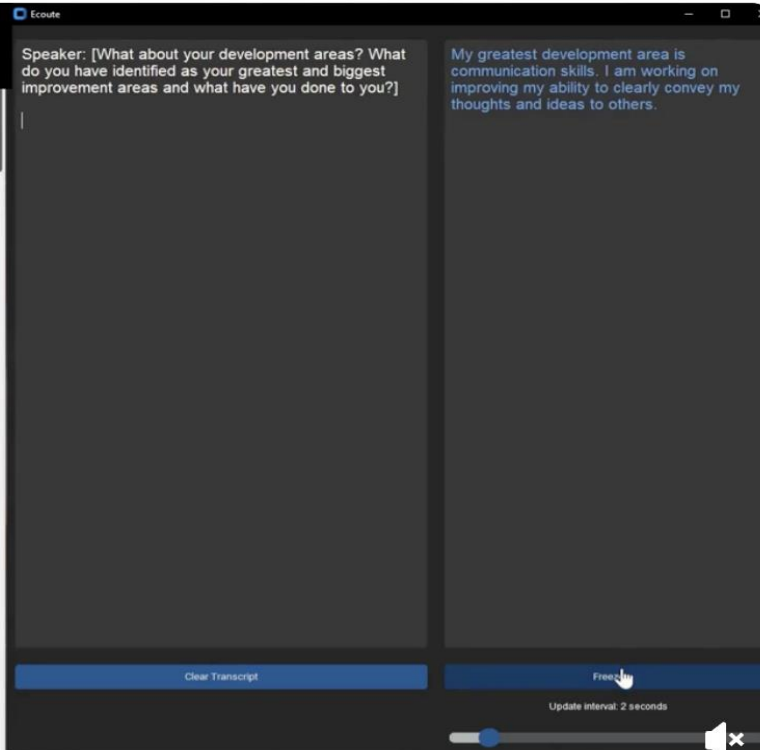
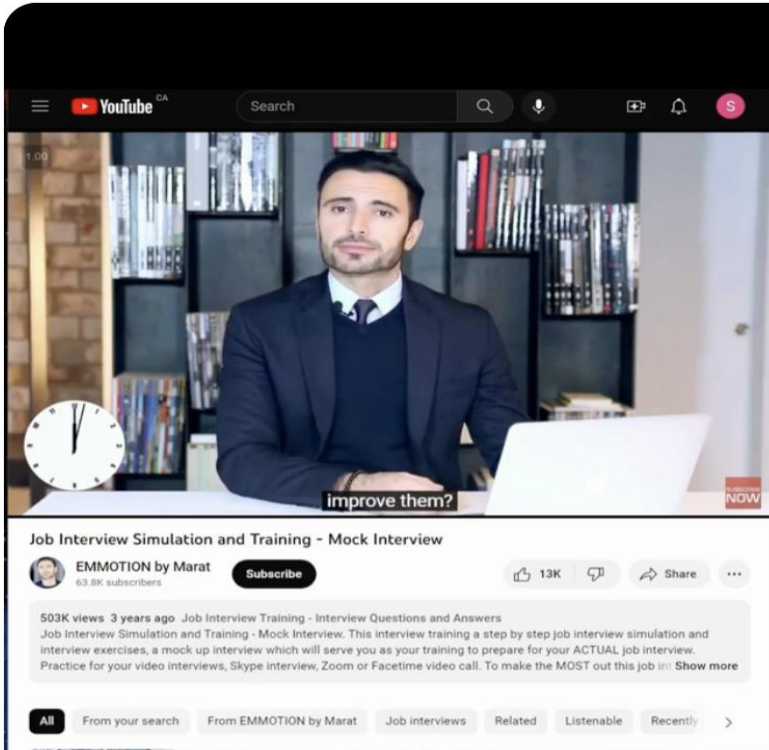




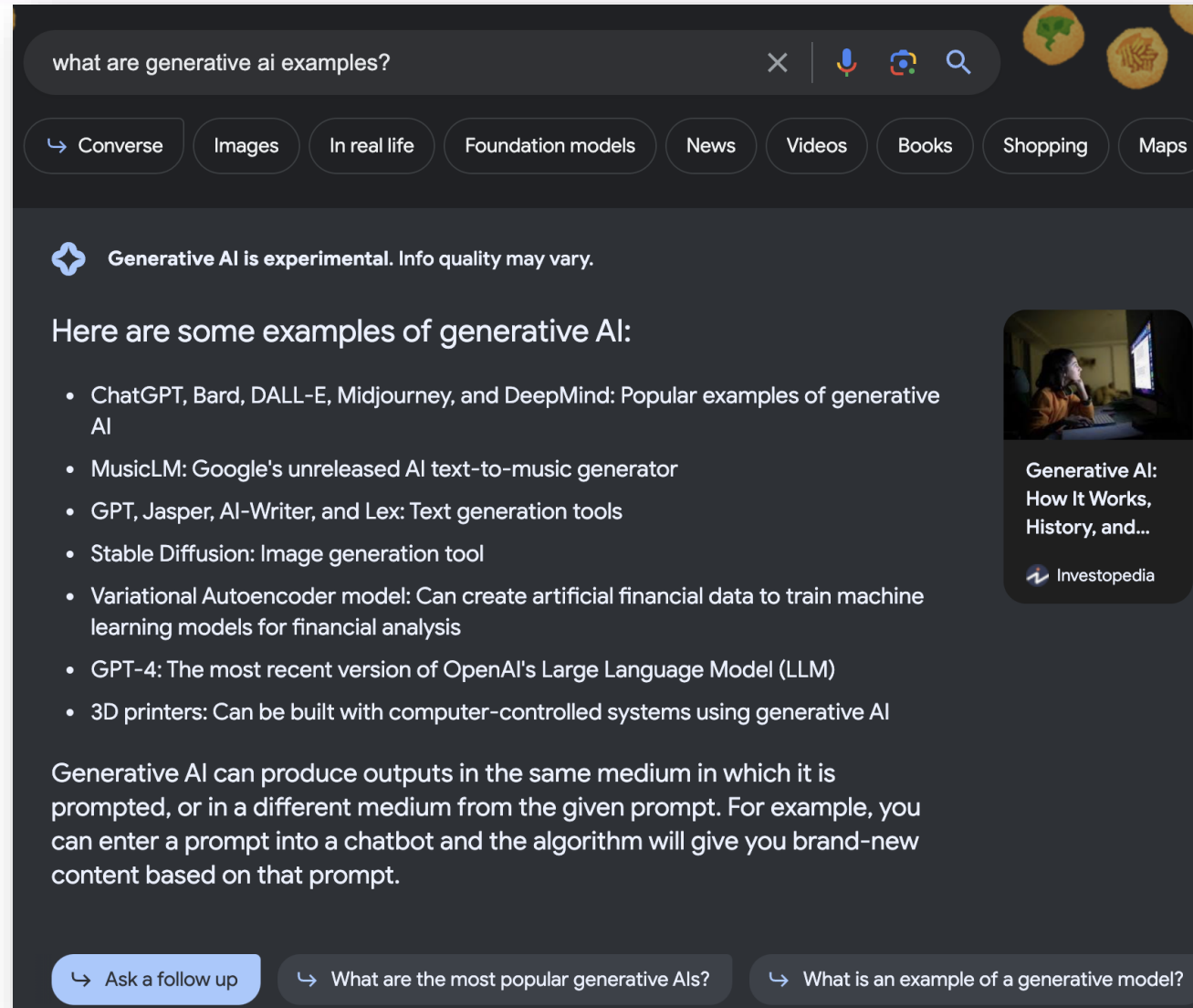
# Here Comes the Point: We have Reached the Ohno Moment...

 **r/ChatGPT** · 2 mo. ago  
by freegold4me [Join](#)

## I Built an GPT4-Powered Live Transcription Tool That Helps You Nail Job Interviews by Generating Perfect Responses in Real-Time!



# Generative AI Explains Itself



what are generative ai examples?

Converse Images In real life Foundation models News Videos Books Shopping Maps

**Generative AI is experimental.** Info quality may vary.

Here are some examples of generative AI:

- ChatGPT, Bard, DALL-E, Midjourney, and DeepMind: Popular examples of generative AI
- MusicLM: Google's unreleased AI text-to-music generator
- GPT, Jasper, AI-Writer, and Lex: Text generation tools
- Stable Diffusion: Image generation tool
- Variational Autoencoder model: Can create artificial financial data to train machine learning models for financial analysis
- GPT-4: The most recent version of OpenAI's Large Language Model (LLM)
- 3D printers: Can be built with computer-controlled systems using generative AI

Generative AI can produce outputs in the same medium in which it is prompted, or in a different medium from the given prompt. For example, you can enter a prompt into a chatbot and the algorithm will give you brand-new content based on that prompt.

Generative AI: How It Works, History, and...  
Investopedia

Ask a follow up What are the most popular generative AIs? What is an example of a generative model?



# Generative AI

- When very large changes arrive we try to use metaphors for what has come before to understand them.
- Often these metaphors limit and shape our thinking.
- For example, 'computers' were called that because of the job they were initially replacing



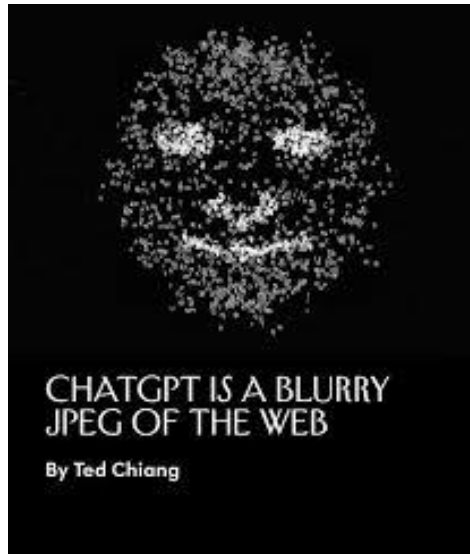
Photo from National Photo Company Collection, Idea from Boaz Barak

# Metaphors for AI

Stochastic Parrots



A Blurry JPEG



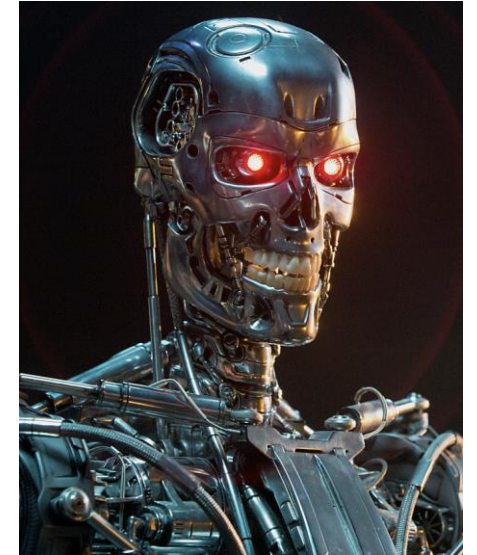
The New McKinsey



A New Alien Specie...



Killer Robots





# What People Think AI Is



# What is AI?



“A.I. is the science of how to get machines to do the things they do in the movies.”

**-Astro Teller, CEO of X**



# Some Opinions on AI

“I’ve always thought of A.I. as the most profound technology humanity is working on—more profound than fire or electricity or anything that we’ve done in the past.”

**-Sundar Pichai**

“Artificial intelligence is the future...for all humankind. It comes with colossal opportunities, but also threats that are difficult to predict. Whoever becomes the leader in this sphere will become the ruler of the world.”

**-Vladimir Putin**

# Techno-discombobulation

- What exactly is AI?
- Can algorithms be powerful without being AI?
- Should I use AI in my business?
- How do I know if AI is working?
- How do I know if it is biased?
- Is it legal?
- How do candidates feel about it?
- How do I begin?
- Where am I???



## Wrong Answers

It's simple!

We have the most/best AI

Trust us!

It's validated...

# Marketing vs Science

Not all marketing is wrong or bullsh!t.

But you should **assume it is** until you verify its accuracy.





# Innovation Financing

How are innovations brought to market in the US today?

- Two main paths:
  - Funded startups
  - Huge tech companies
- Funded startups require hockey stick growth plans
- Huge tech companies are beholden to shareholders who expect returns

# Generative AI Strengths and Limitations

Strengths	Limitations
New, human-like output	Accuracy
Ability to learn quickly	Bias
Massive integration across modalities	Resource intensive
Fast technology growth/adoption	Ethical concerns
	Creativity limit

# Central Questions to Consider

- What is AI? Generative AI?
- How can it be leveraged today? Tomorrow?
- How could it be used in our business (responsibly, effectively)?
- What would it take for us to use it?





**How do we make sense of all this?**



# Our Field Knows The Answer!

- It's the scientific method!
- Uniform Guidelines, SIOP Principles, etc.
- Your skills and perspective are extremely valuable in this problem space!



# How to Approach AI

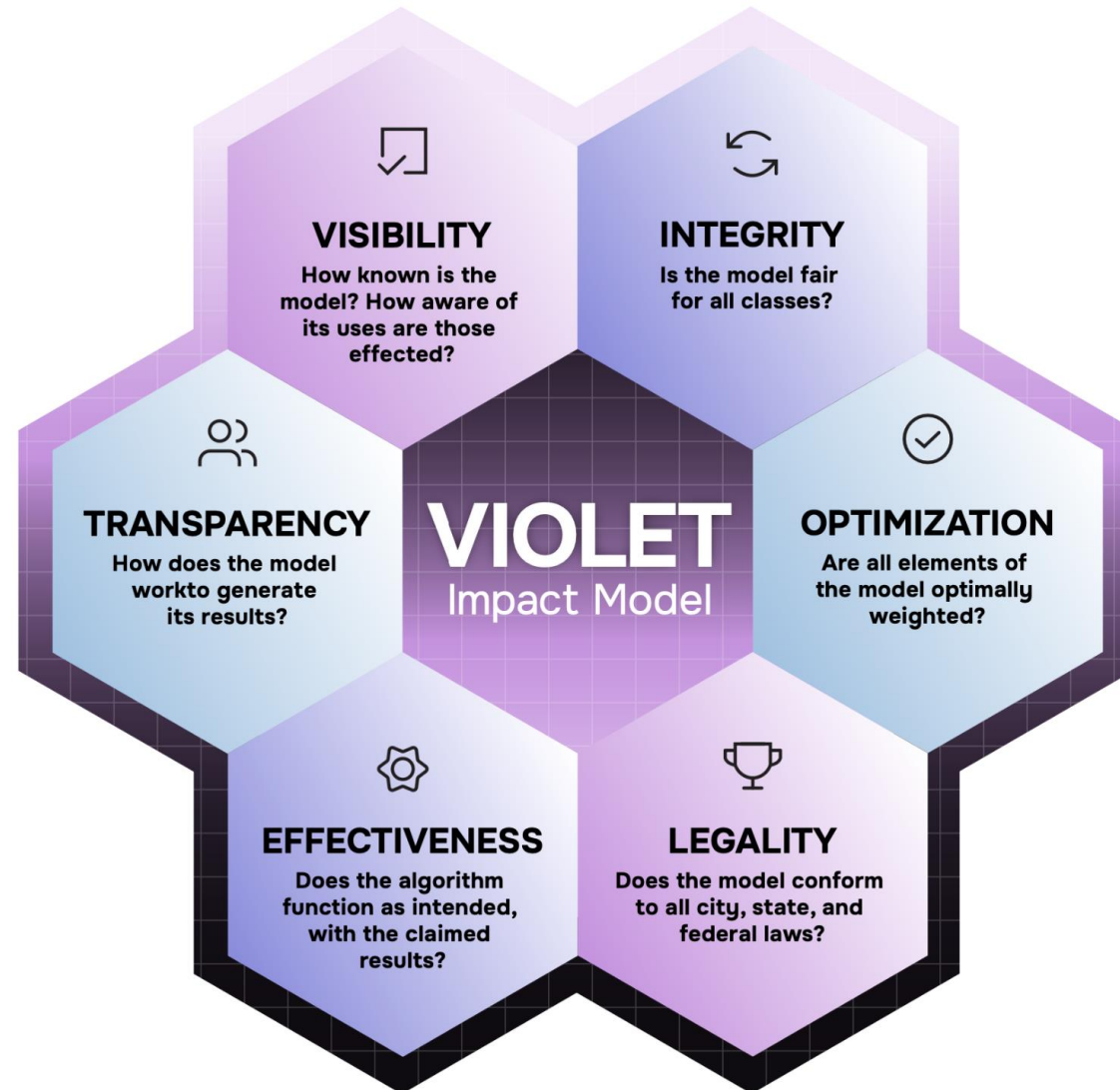
1. Understand what it can do and validate that it does it.
2. Monitor adverse impact regularly.
3. Maintain awareness of existing and emerging AI legislation.
4. Store data carefully and in alignment with agreements and laws.
5. Use your understanding of data, science, validation, and employment law to educate others.
6. And above all...



# Be a Guardian of Humanity



# The VIOLET Impact Model






# Example VIOLET Report

## VIOLET Impact Report

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Summary report on ACME, Inc's use of an AI-powered algorithm to score candidate applications in their hiring process.

Element	Results	Score
 <b>Visibility</b>	<p><b>Highs:</b> Clear candidate messaging present with opt-out option; algorithm use is apparent to both candidates and recruiters interacting with the hiring software.</p> <p><b>Lows:</b> Approximately 40% of higher level talent acquisition leaders are not aware of the use of algorithms; unclear to candidates what happens to their applications if they opt out.</p> <p><b>Actions:</b> Educate talent leaders on the use of algorithms and their risks and benefits; clarify candidate messaging to include statement on opt out ramifications.</p>	<b>4</b>
 <b>Integrity</b>	<p><b>Highs:</b> Available data showed that the size of protected class differences was practically insignificant, though some large sample comparisons resulted in significant differences.</p> <p><b>Lows:</b> Missing data prevented the calculation of differences for American Indians as well as several intersectional groups.</p> <p><b>Actions:</b> Build process to monitor differences continually; investigate alternate sources of data on low volume protected classes and intersectional groups.</p>	<b>3</b>
 <b>Optimization</b>	<p><b>Highs:</b> Algorithm runs optimally in training dataset; comprehensive set of parameters taken into account during development.</p> <p><b>Lows:</b> Significant loss of predictive power in various geographies; wide fluctuation in group differences across regions.</p> <p><b>Actions:</b> Retrain model using multiple outcome optimization or similar techniques; investigate alternate scoring that could reduce variation in group differences.</p>	<b>3</b>

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# Decoding Talent

BOOK EDITION

- Presenting a comprehensive vision of the future of talent management in the age of big data and AI
- Introducing a talent analytics maturity model to help truly decode talent organization wide
- Released in February, 2022

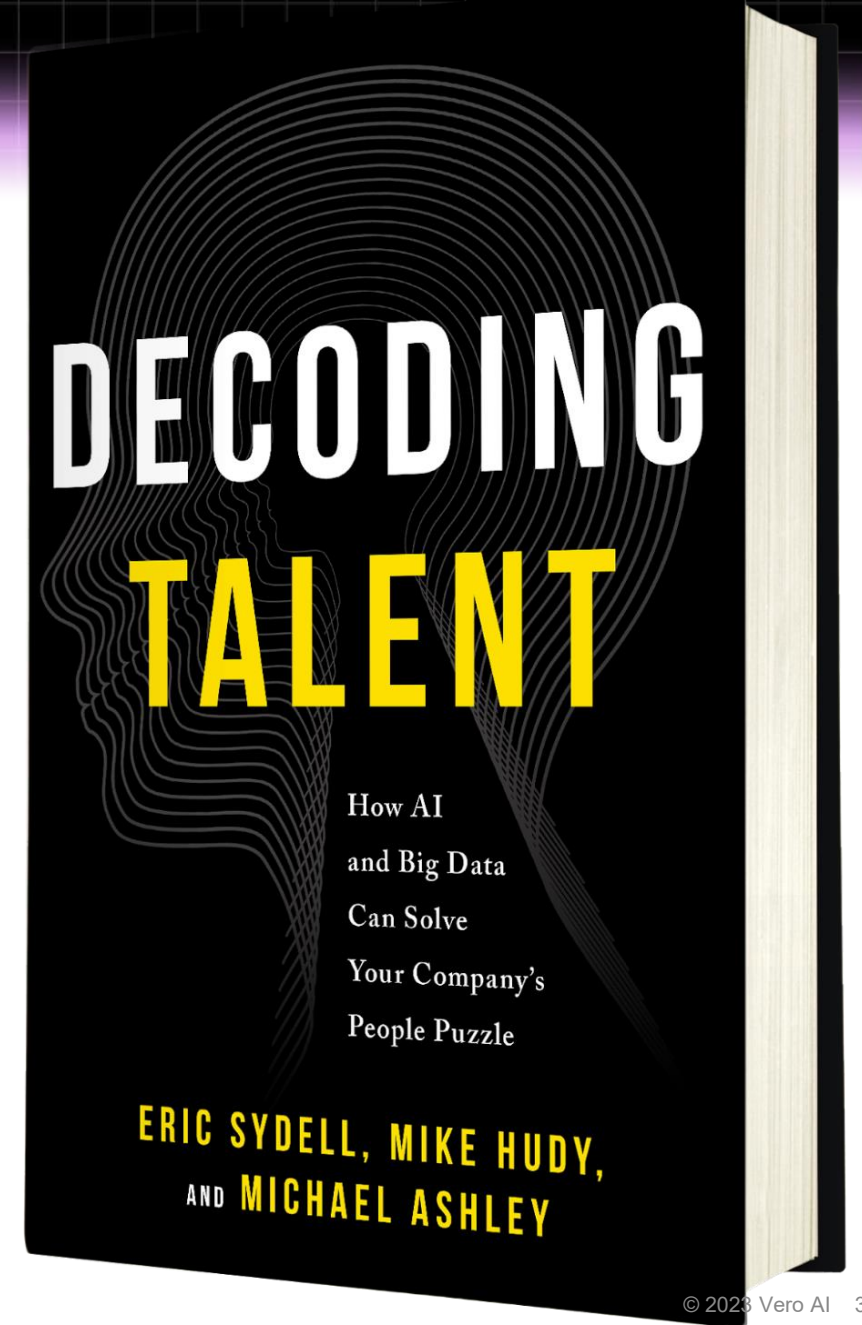


**FAST  
COMPANY**  
*Press*

A clear and powerful plan for how to leverage tech, data, and AI to finally and truly revolutionize HR and talent management

—Jim Livingston, chief people officer, Rock Central

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# Talent Analytics Maturity Model

## **Level 5: Decoded Talent/Automated Analytics**

Ubiquitous human data collection including pre- and post-hire data; automatic AI-driven analytics

## **Level 4: Predictive Analytics**

Integration of outcome data; predictive modeling; differential prediction  
Reports can drive strategy, but analytics process is primarily manual

## **Level 3: Benchmarks & Normative Analytics**

Comparison of results across groups, both internally and externally  
Reports used for decision making and issue identification

## **Level 2: Coordinated Reporting**

Consistent, consolidated reporting using dashboards  
Reports are tactical; used primarily for operations management

## **Level 1: Basic Operational Reporting**

Operational reporting for measurement of efficiency, compliance, and EEO needs  
Dependent on ad-hoc processes; uncoordinated across units; spreadsheet-based

# The Decoding Talent Model



# AI is the (Utopian or Dystopian?) Future

It is up to us to decide!





VEROAI

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