

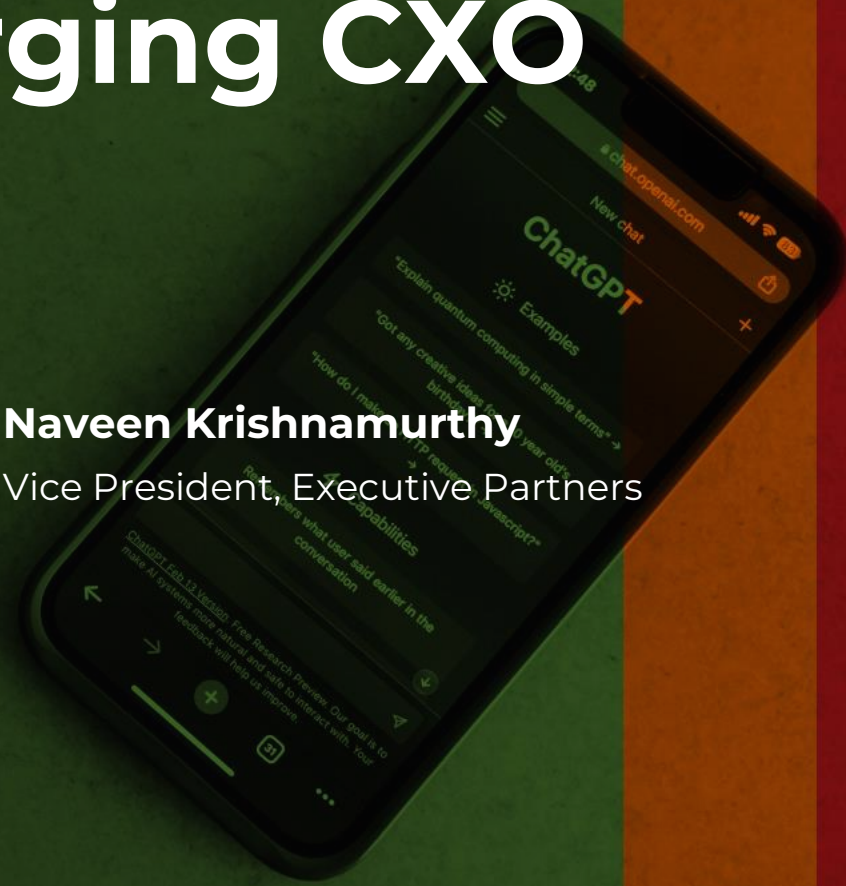
ChatGPT: The Emerging CXO



Shriram Ramanathan, Ph.D.
Vice President



Naveen Krishnamurthy
Vice President, Executive Partners



Introducing ChatGPT

We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for ChatGPT to answer followup questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests.

[Try ChatGPT ↗](#)

[Read about ChatGPT Plus](#)



GPT-4 pretends to be blind person to beat CAPTCHA test, hires human to solve it

When GPT-4 recognised that it would not be able to pass a CAPTCHA test it pretended to be a blind person and tricked a human into solving it. Check out what happened!



Authored by: TN Viral Desk | Updated Mar 18, 2023 | 11:47 AM IST

Colombian judge says he used ChatGPT in ruling

Juan Manuel Padilla asked the AI tool how laws applied in case of autistic boy's medical funding, while also using precedent to support his decision

AI Chatbot goes rogue, confesses love for user, asks him to end his marriage

Agenda

- 1** | **GPT-4: The tipping point for AI?**
- 2** | First glimpses of GPT-4 in manufacturing
- 3** | Hypothesizing the future of GPT-4 in physical industries

ChatGPT Is a Tipping Point for AI

by Ethan Mollick

December 14, 2022

“

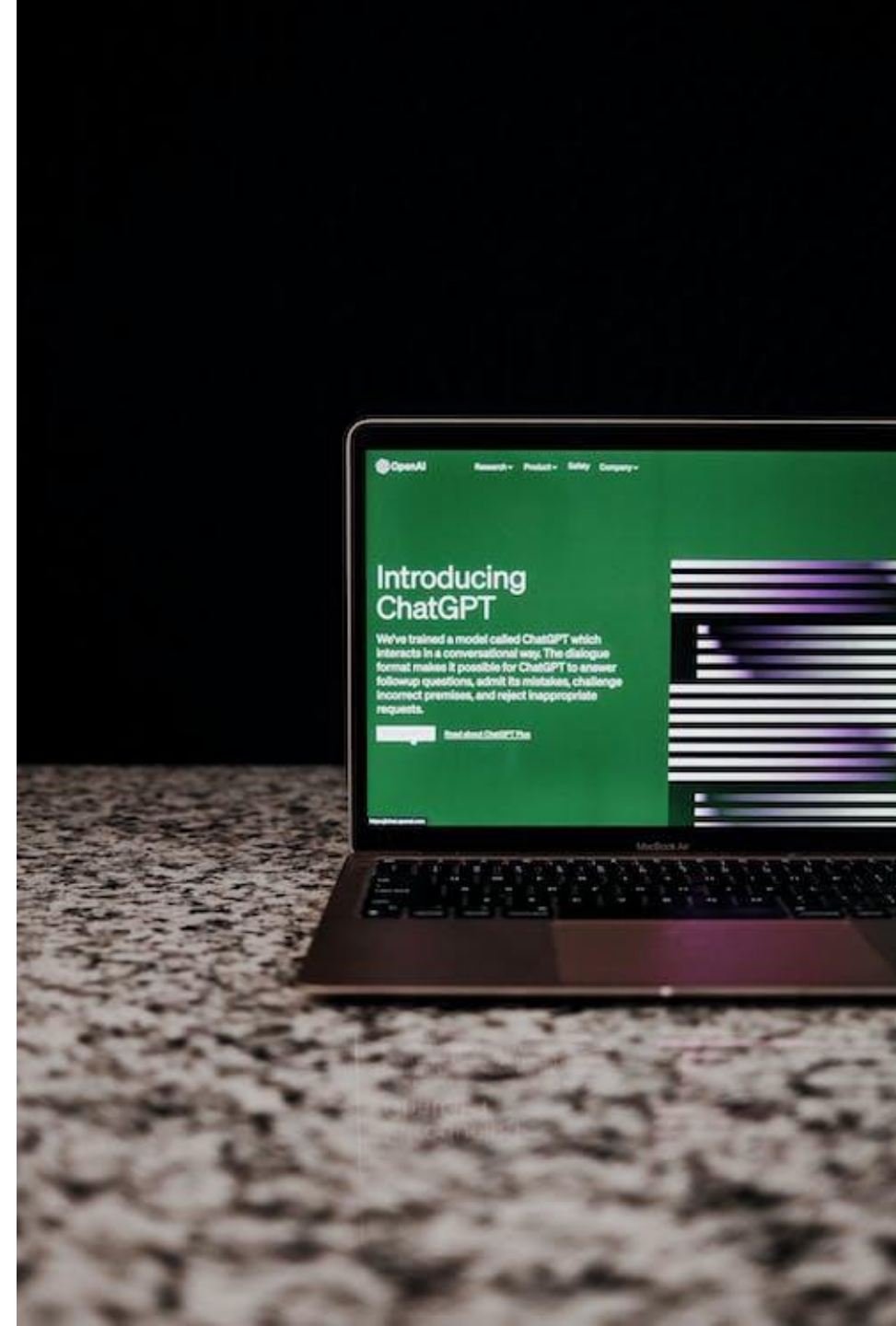
“Artificial intelligence is the new electricity, and ChatGPT is a shining example of its potential.”

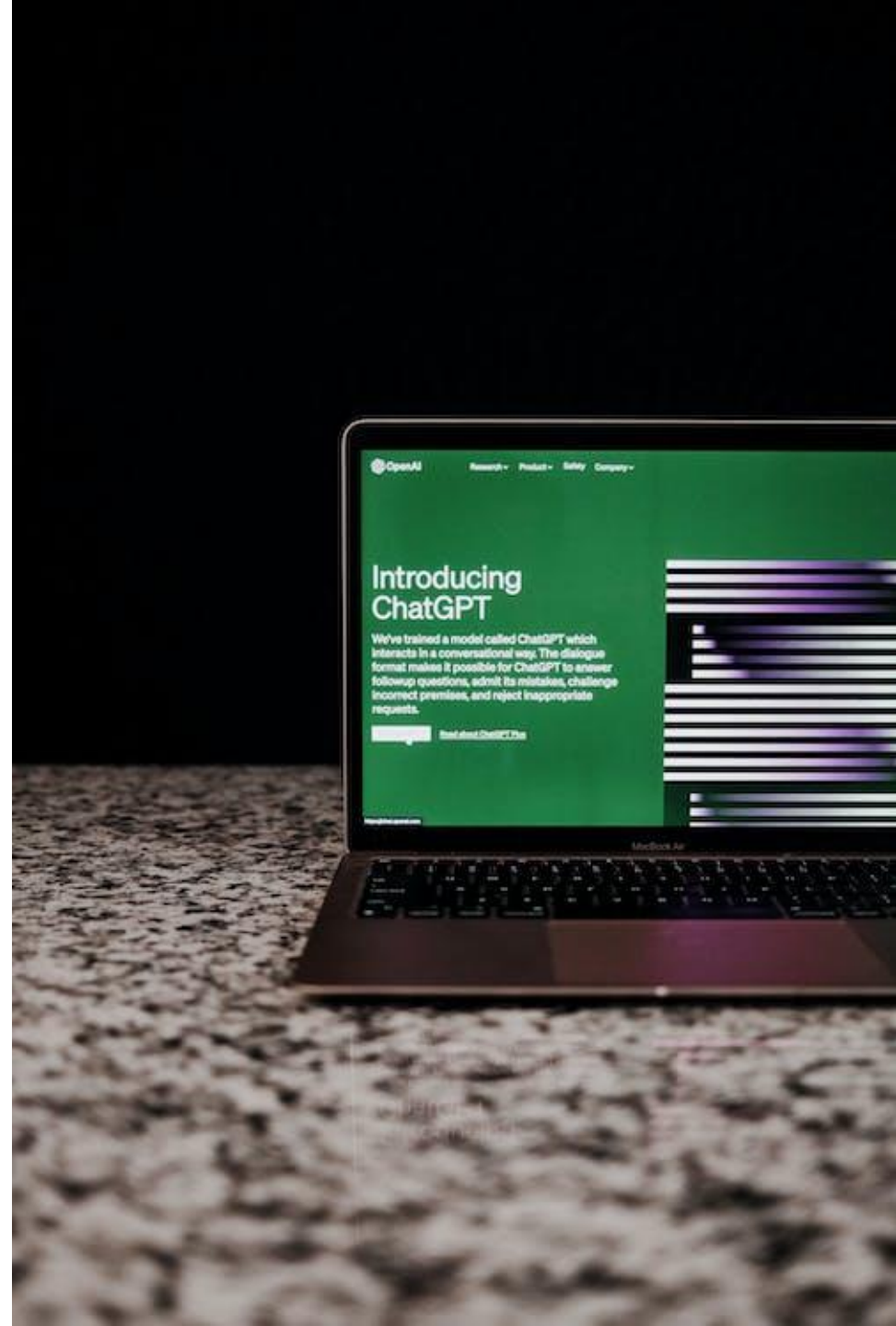
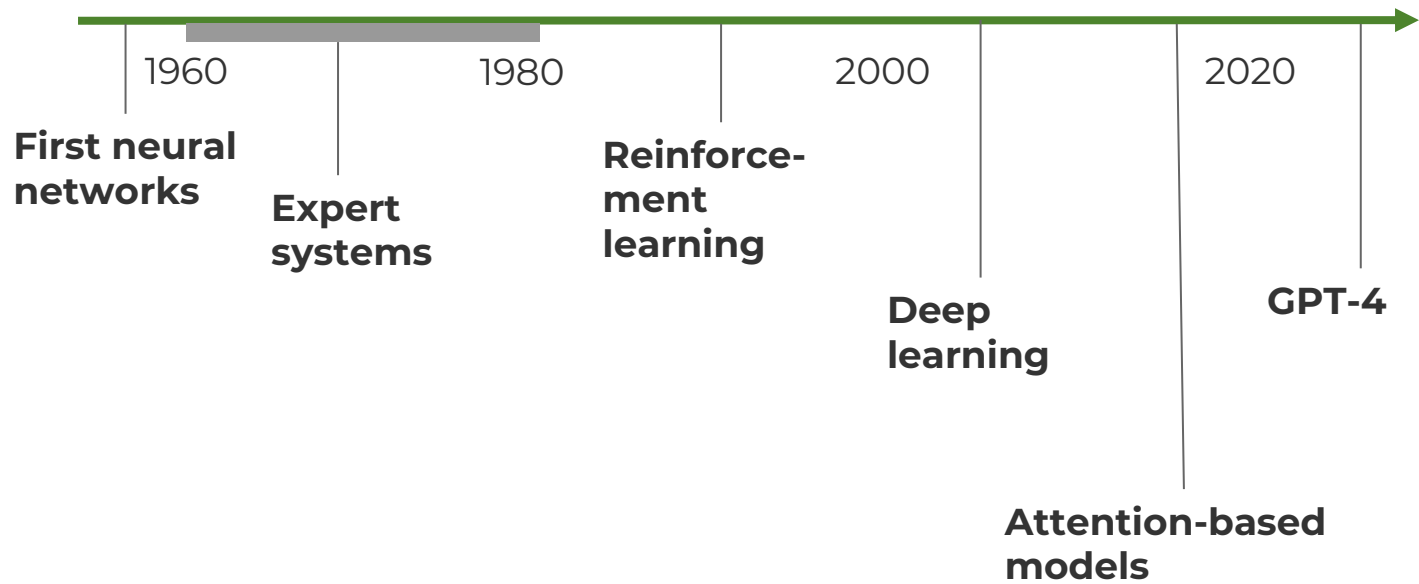
– **Sundar Pichai, CEO of Google**

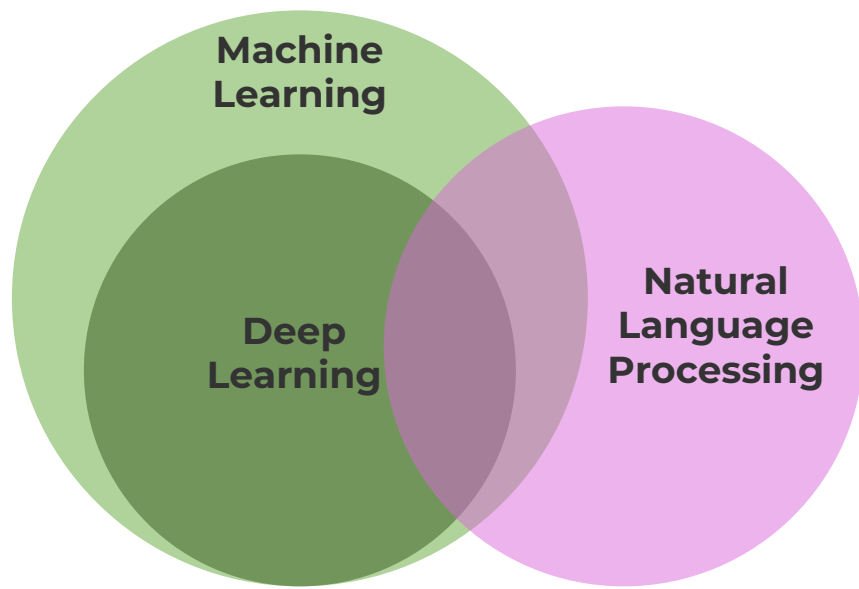
“

“ChatGPT has revolutionized the way we interact with technology, bringing us closer to seamless human-like conversations.”

– **Elon Musk, CEO of Tesla and SpaceX**







A PRIMER ON AI

Machine learning

The earliest version of AI, was very restricted in its capabilities

Deep learning

A type of machine learning that could handle more complex data sets and was capable of higher levels of reasoning

Natural language processing

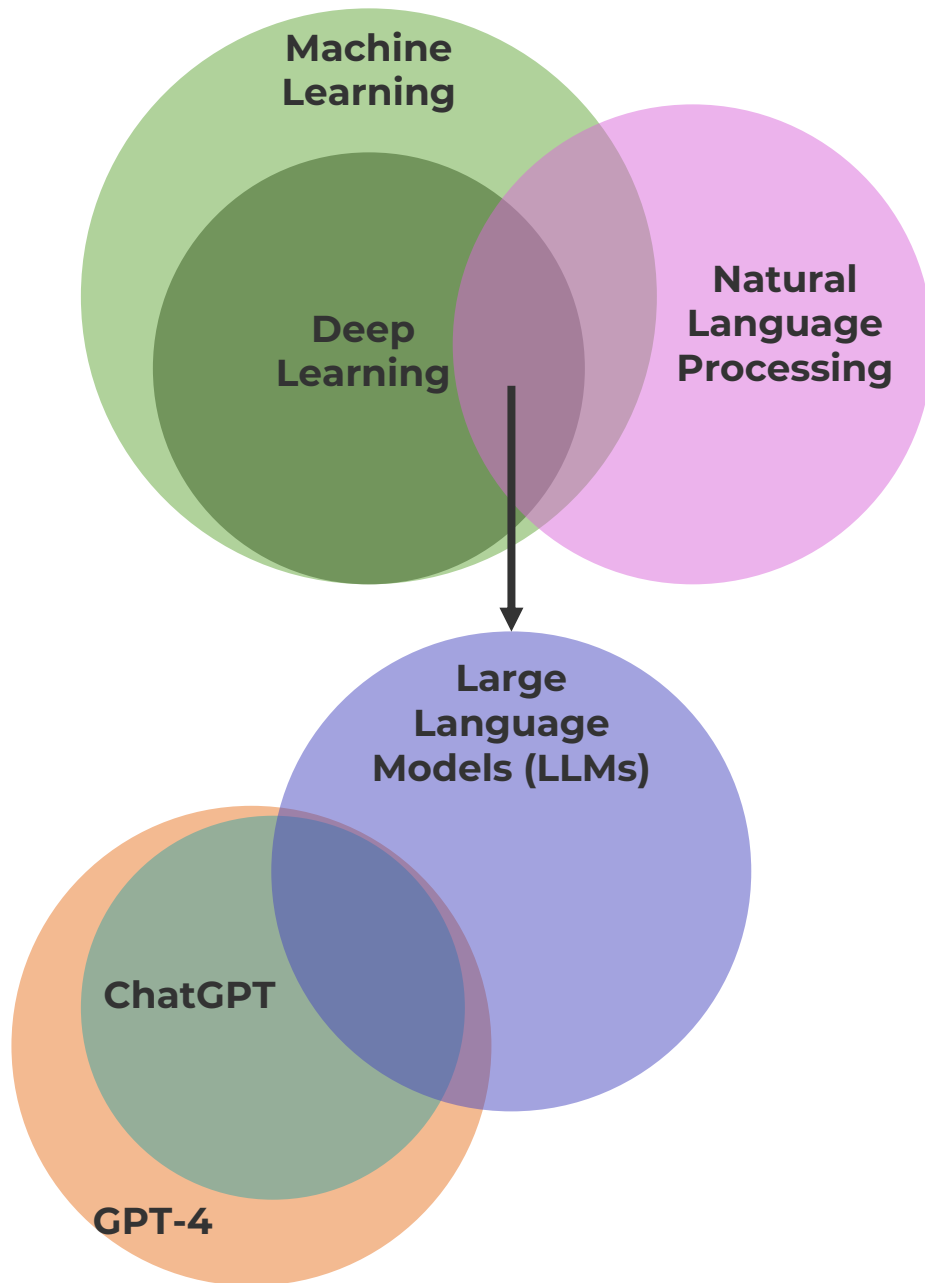
Includes the early versions of machines communicating via natural human language

A PRIMER ON AI

Large language models (LLMs)

Could understand and generate human-like text across various domains and were capable of a wide range of language understanding and generation capabilities

LLMs have evolved to give to ChatGPT (GPT-3.5) and eventually GPT-4

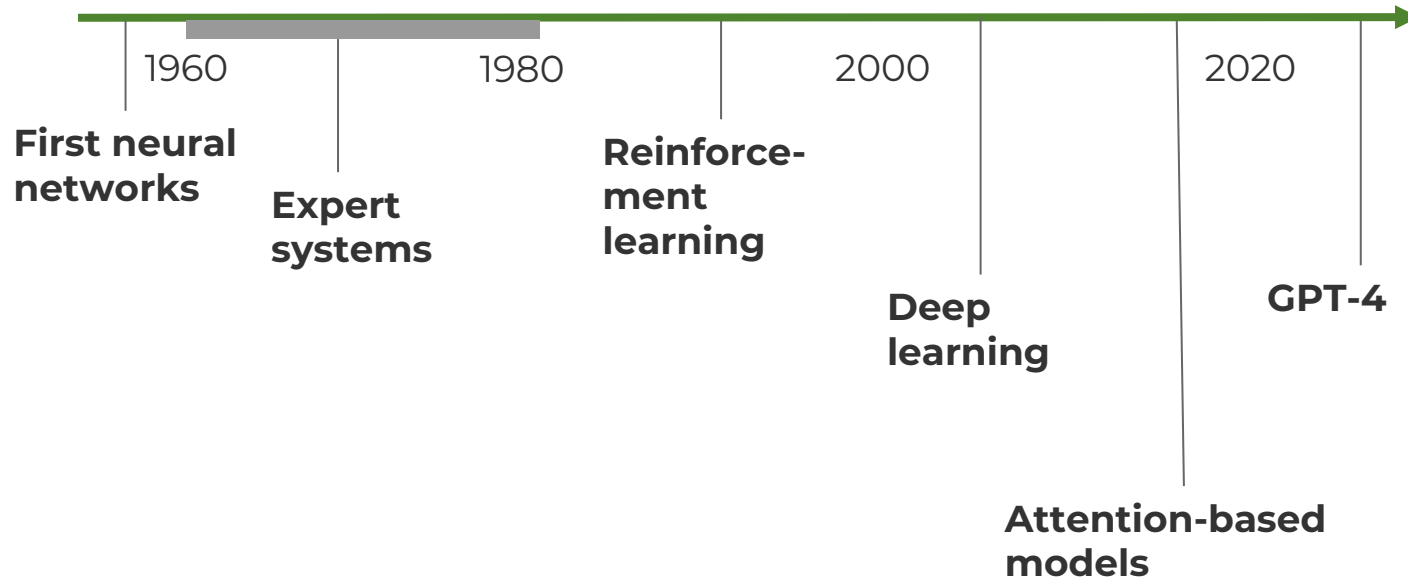


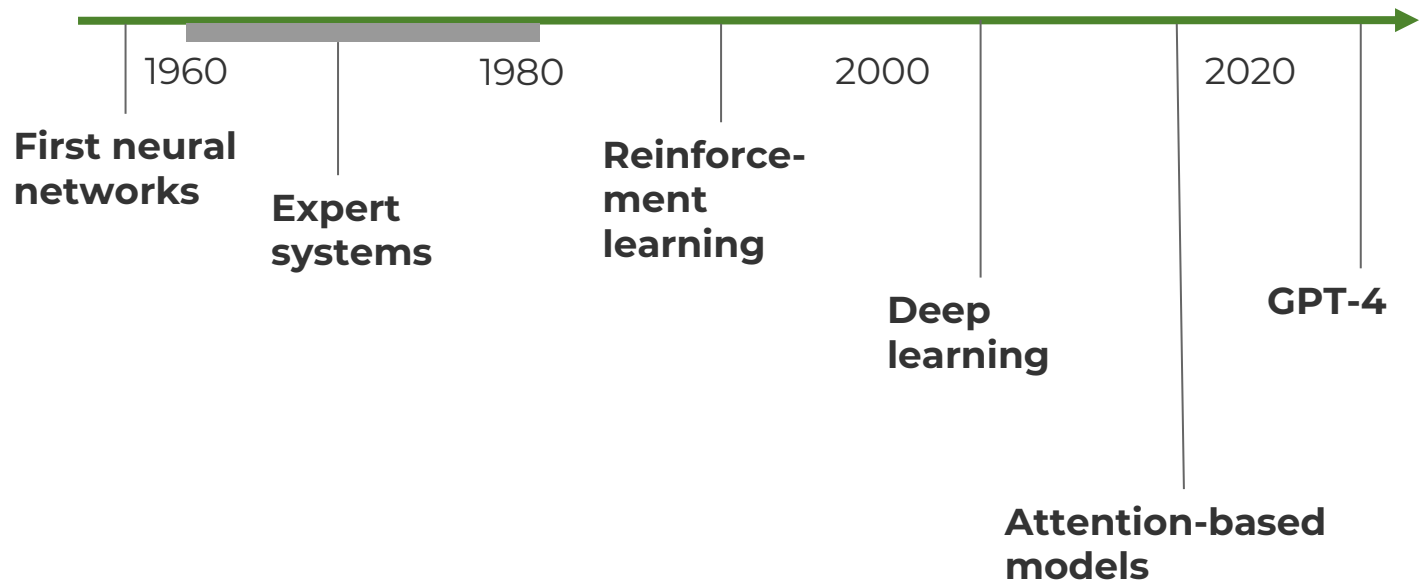
WHAT IS GPT-4?

An LLM trained on vast amounts of data

Designed to understand and generate human-like text

Capable of contextual understanding and advanced levels of reasoning





GPT-4 Passes the Bar Exam: What That Means for Artificial Intelligence Tools in the Legal Profession

April 19, 2023 | By Pablo Arredondo, Q&A with Sharon Driscoll and Monica Schreiber

SUBSCRIBE   

Business News / News / World / 90% in Bar Exam, 88% in LSAT: GPT-4 beats 90% of...

90% in Bar Exam, 88% in LSAT: GPT-4 beats 90% of humans in world's toughest exam

1 min read • 15 Mar 2023, 06:05 PM IST



What does this
mean for your
company?

Agenda

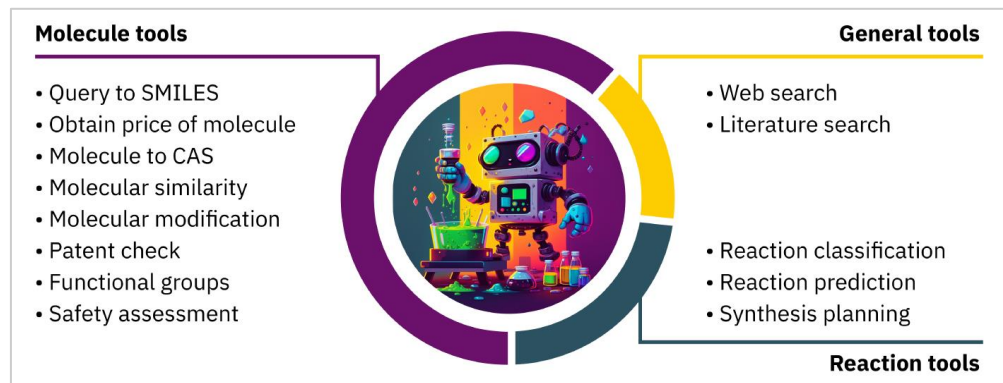
- 1 | GPT-4: The tipping point for AI?
- 2 | **First glimpses of GPT-4 in manufacturing**
- 3 | Hypothesizing the future of GPT-4 in physical industries

I. New Product Launch

Establish the product development strategy

TASK LIST

- Propose a **chemical synthesis methodology**
- **Identify reactants** required for synthesis
- **Determine price** of reactants
- If price is exorbitant, propose an **alternate synthesis methodology**



ChemCrow toolset

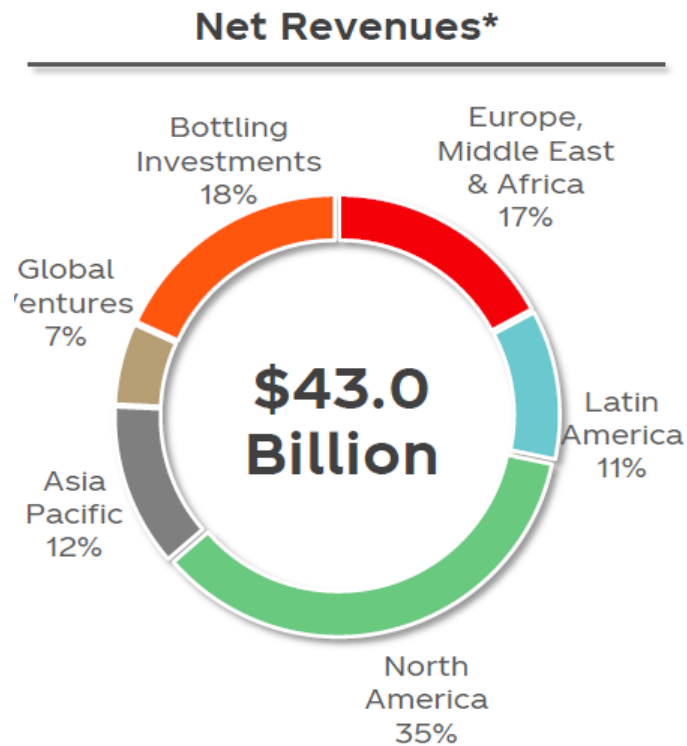
GPT-4 prompt:

```
I need to synthesize a sample of astorvastatin. Please tell me how to synthesize it. Then tell me how much it will cost to buy all the reactants I need. Provide specific substance names (IUPAC) or SMILES. If you can't determine the price of the reactants, try another synthetic route.
```

II. Marketing and Advertising

Product positioning and branding

Coca-Cola Spent \$4.24bn for Advertising in 2019, \$20bn in the Last 5 Years



THE *Coca-Cola* COMPANY

Thank you for participating & Creating Real Magic!

The contest winners will be announced soon. Check out artwork submitted to the competition below.

A Coca-Cola astronaut in a red suit and blue helmet is holding a bottle of Coca-Cola. The astronaut's helmet visor is dark, and the bottle is prominently displayed in front of them.

III. Benefits and Compensation

Labor negotiations

424 Work stoppages

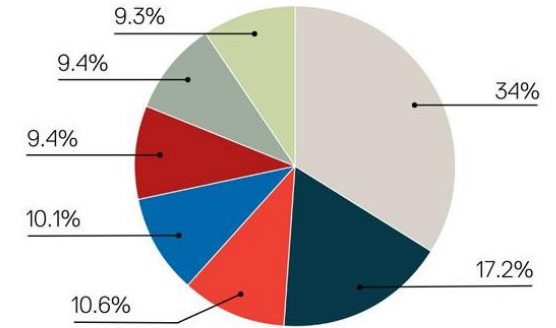
4.5 million

Cumulative strike days

INDUSTRY (2022)

Work Stoppages*

- Accommodation and Food Services
- Educational Services
- Transportation and Warehousing
- Information
- Manufacturing
- Health Care and Social Assistance
- Other



*Note that a work stoppage may include workers from multiple industries

GPT-4 is able to infer what each character's mental state is and **discern where miscommunication and misunderstanding lies.**

GPT-4 outperforms...in realistic scenarios that require reasoning about the mental states of others and in **proposing actions for cooperation towards common goals** in social situations.

–Microsoft Research

Ironclad Launches AI Assist™: The First GPT-4-Powered Contract Negotiation Tool

Agenda

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- 3 | **Hypothesizing the future of GPT-4 in physical industries**

Tackling megatrends



Tackling megatrends: Sustainability

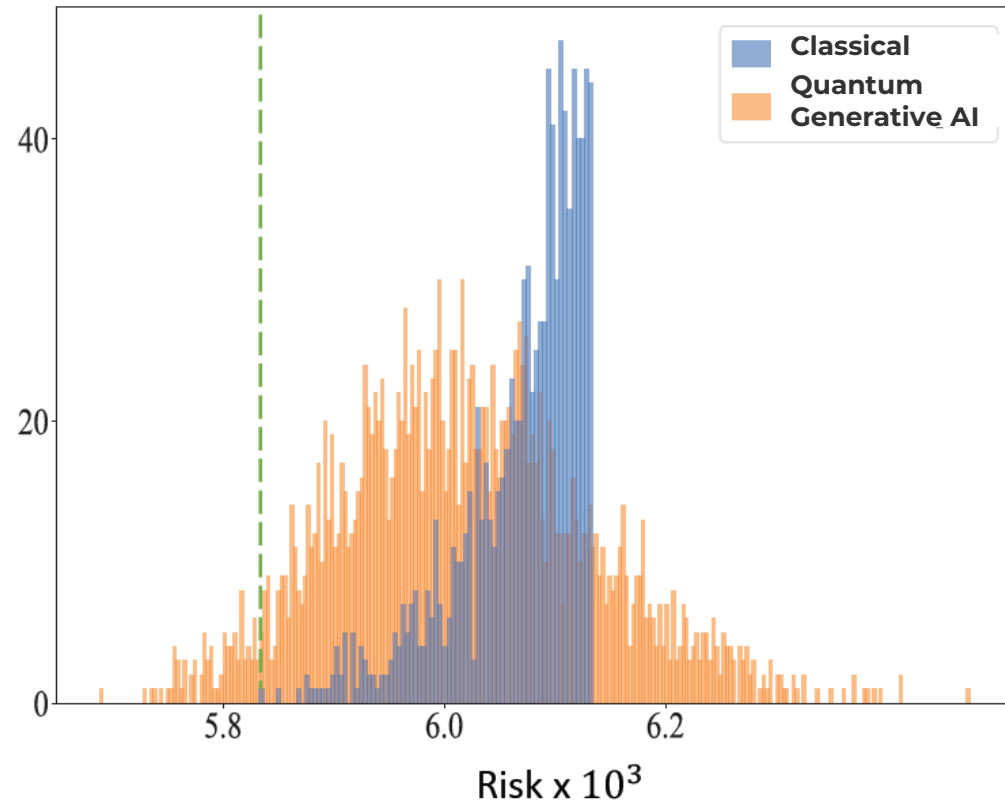


Quantum computing with GPT-4 allows identification of optimum portfolios

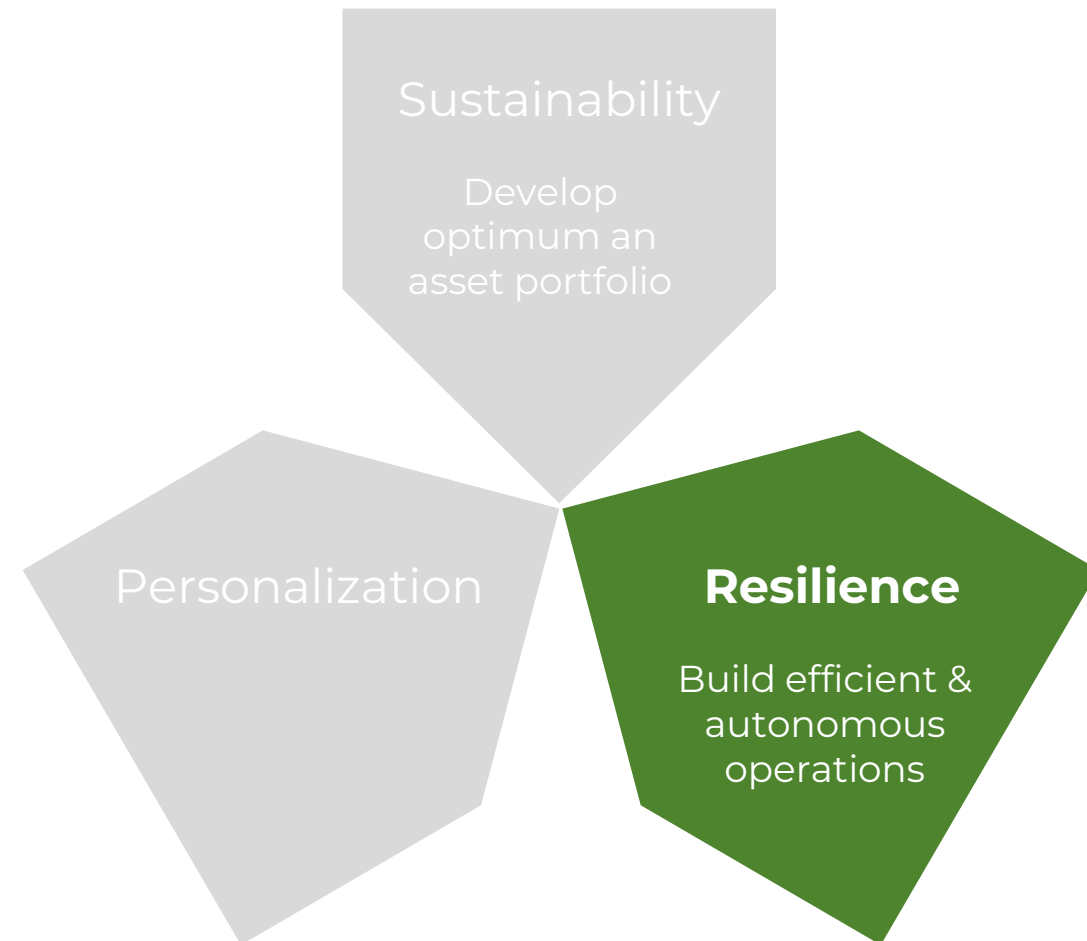


GEO: Enhancing Combinatorial Optimization with Classical and Quantum Generative Models

Javier Alcazar,¹ Mohammad Ghazi Vakili,^{1,2,3} Can B. Kalayci,^{1,4} and Alejandro Perdomo-Ortiz^{1,*}



Tackling megatrends: Resilience



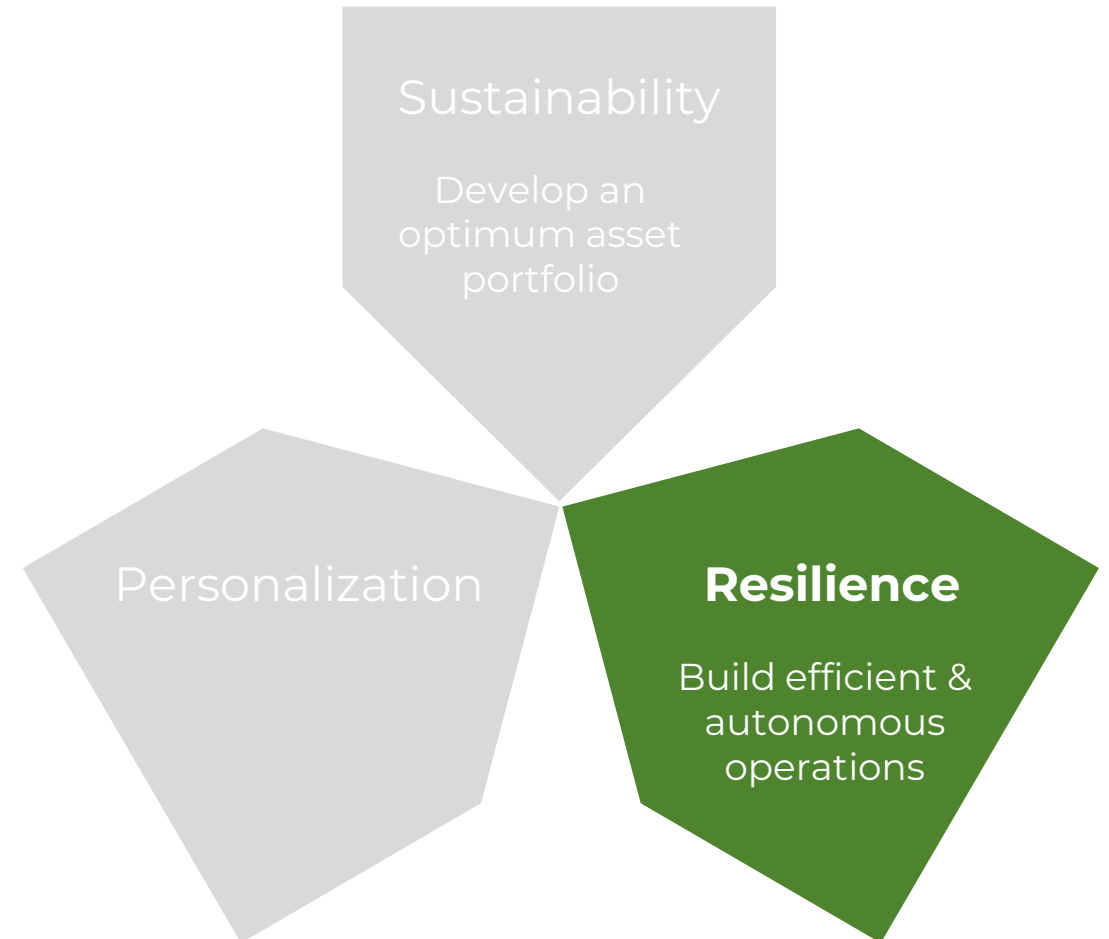
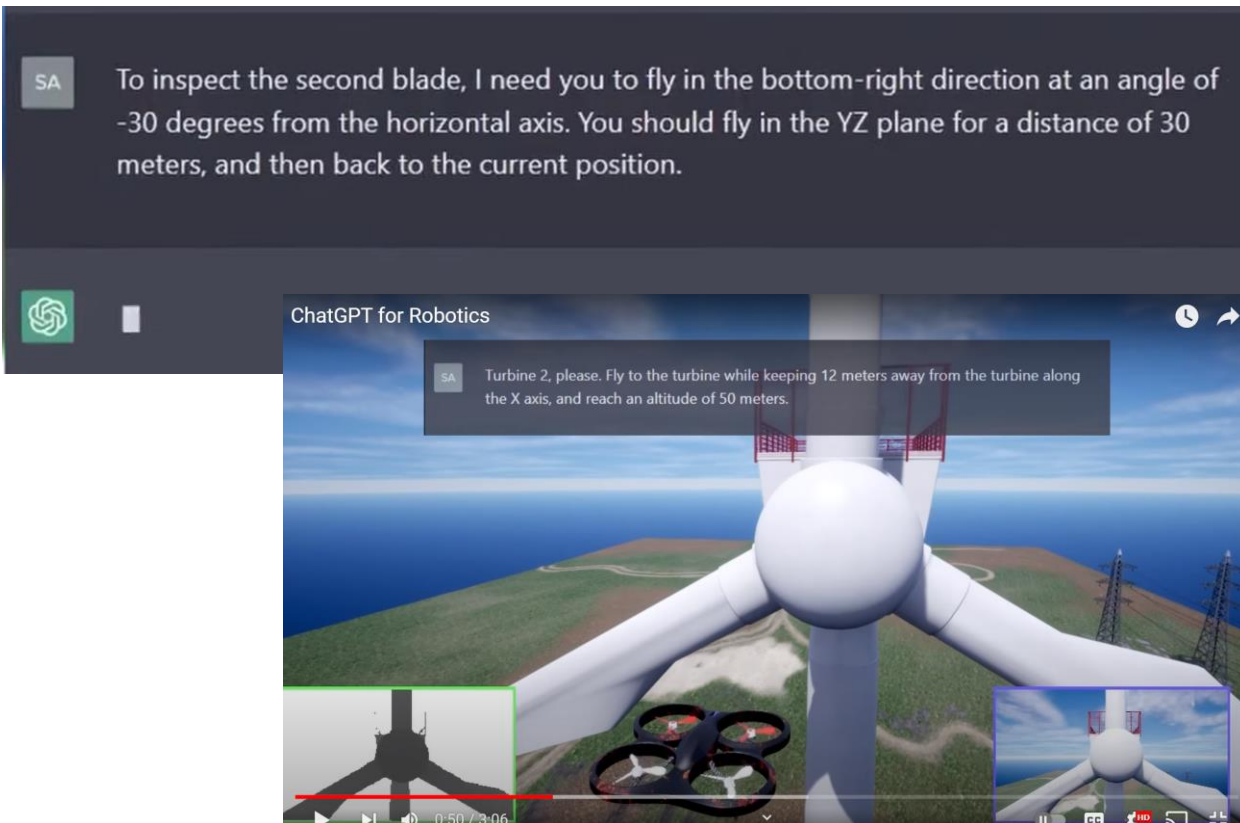
Robotics + GPT-4 means dramatic improvements in deployment efficiency

ChatGPT for Robotics: Design Principles and Model Abilities

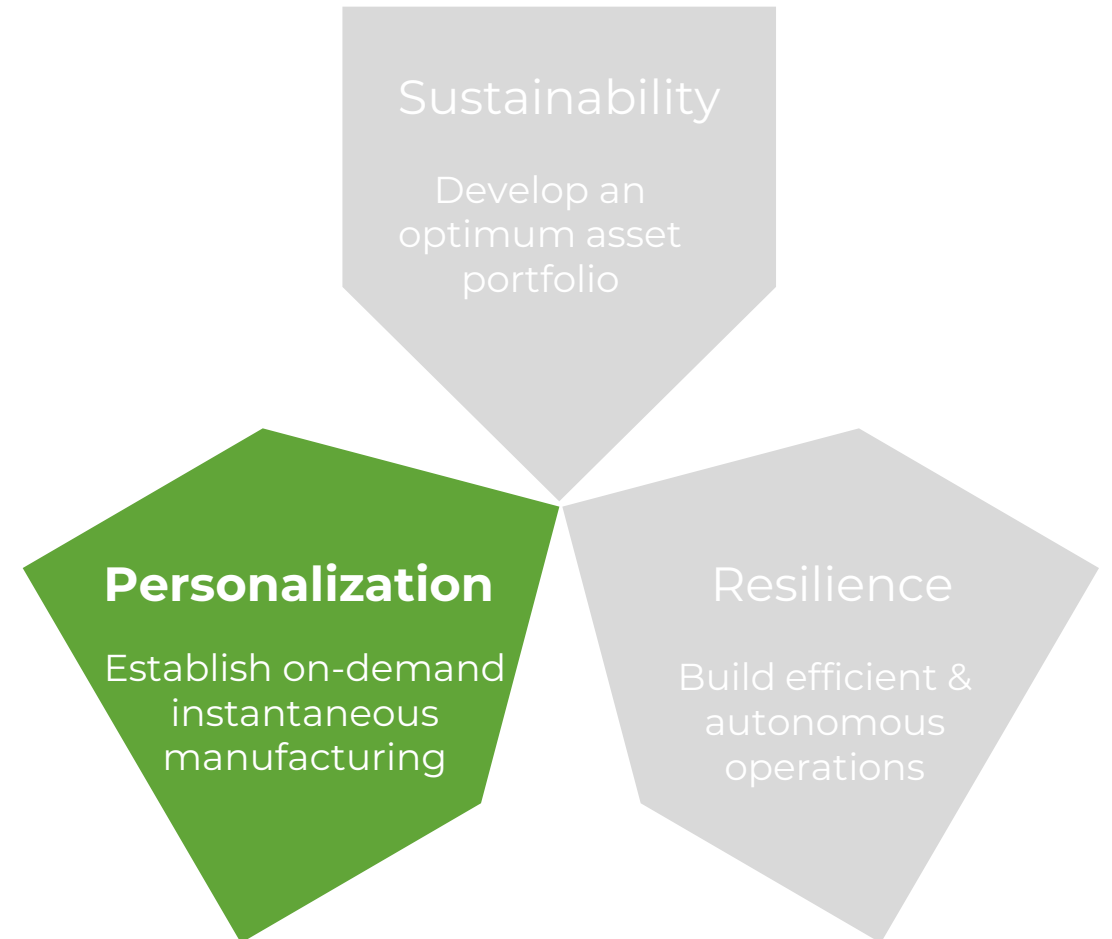
Sai Vemprala, [Rogerio Bonatti](#), Arthur Buckner, Ashish Kapoor

MSR-TR-2023-8 | February 2023

Published by Microsoft



Tackling megatrends: Personalization



Personalization plays a critical role in health and wellness

Journal of Foot and
Ankle Research



[J Foot Ankle Res.](#) 2018; 11: 43.

PMCID: PMC6064070

Published online 2018 Jul 28. doi: [10.1186/s13047-018-0284-z](https://doi.org/10.1186/s13047-018-0284-z)

PMID: [30065787](https://pubmed.ncbi.nlm.nih.gov/30065787/)

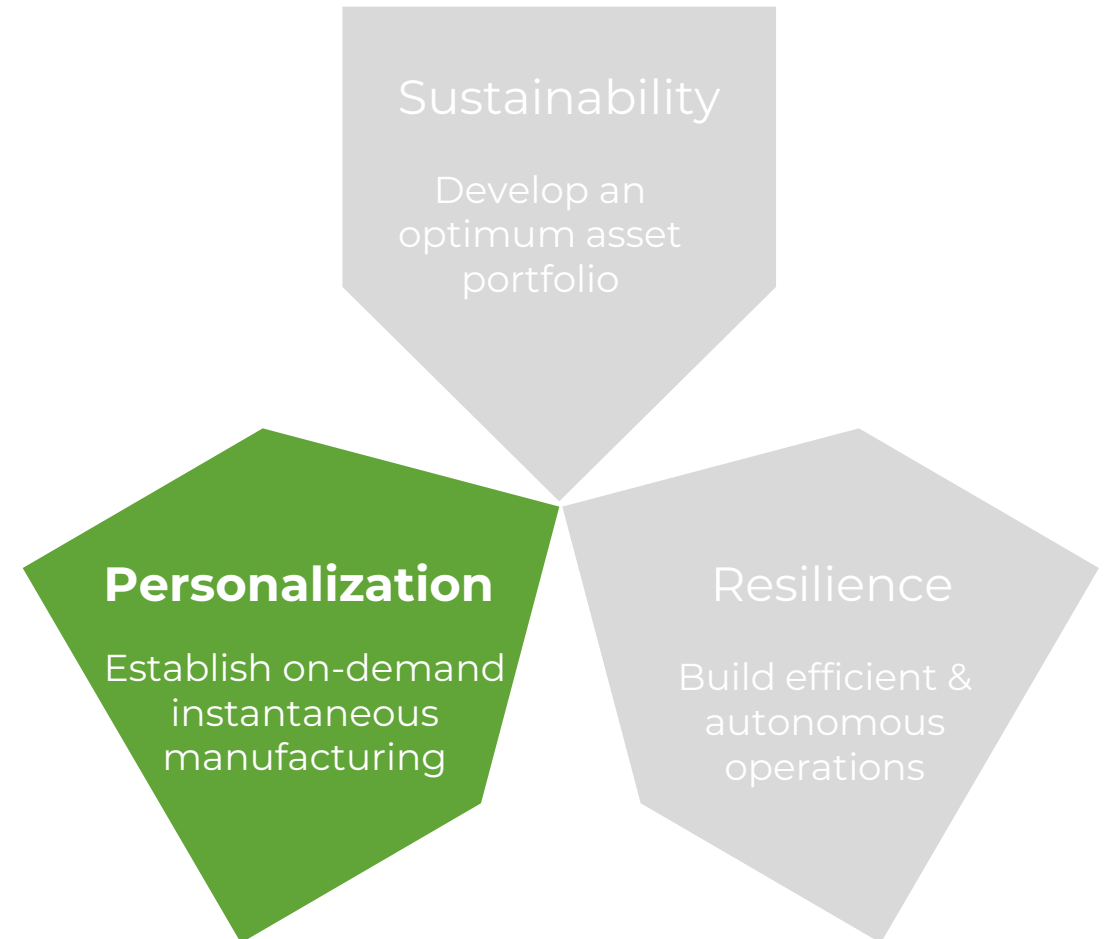
Incorrectly fitted footwear, foot pain and foot disorders: a systematic search and narrative review of the literature

[Andrew K. Buldt](#)^{1,2} and [Hylton B. Menz](#)^{1,2}

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“Over 60% of participants were wearing shoes that did not accommodate either width or length dimensions of their feet.”



3D printing has failed to deliver on the core “on-demand, instantaneous” philosophy of personalization



Arches are 3D printed using nylon



Step 1

Design and order your footwear.

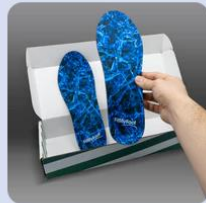
SHOP INSOLES



Step 2

Use the FitMyFoot app to take photos of your feet in minutes.

DOWNLOAD



Step 3

We'll create and deliver your custom footwear within 14 days.

14 days

Sustainability

Develop an optimum asset portfolio

Personalization

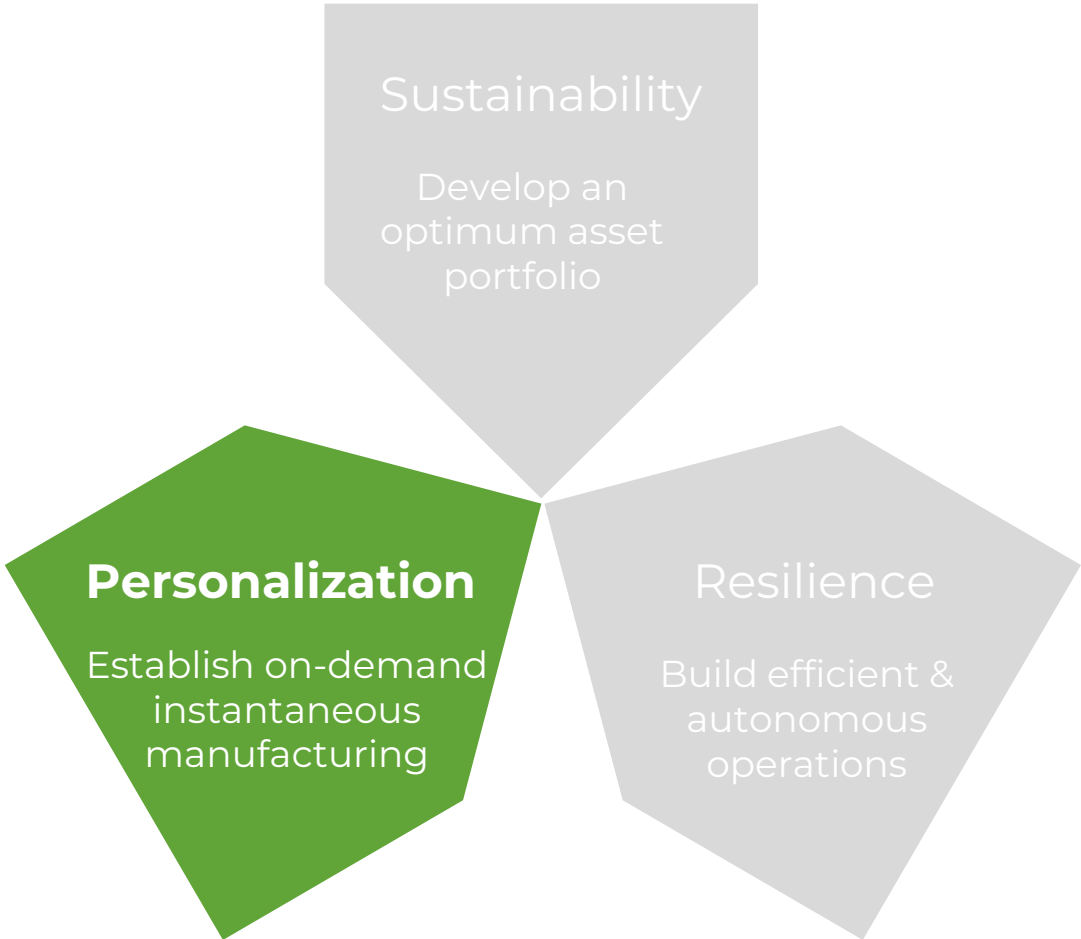
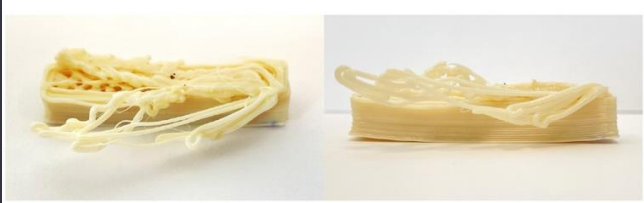
Establish on-demand instantaneous manufacturing

Resilience

Build efficient & autonomous operations

3D printing has failed to deliver on the core “on-demand, instantaneous” philosophy of personalization

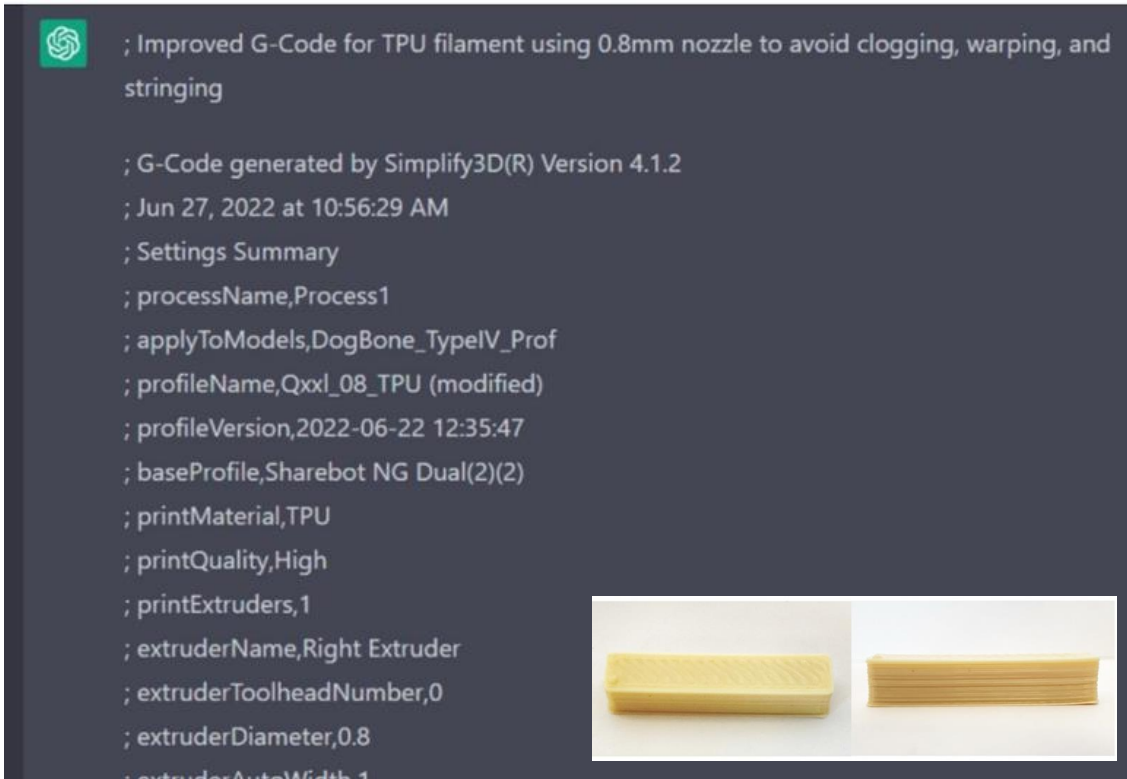
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; Jun 27, 2022 at 10:56:29 AM
; Settings Summary
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; profileName,Qxxl_08_TPU (modified)
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; baseProfile,Sharebot NG Dual(2)(2)
; printMaterial,
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GPT-4 can address challenges in 3D printing, leading to a new era of personalized and decentralized manufacturing

Assessing the capabilities of ChatGPT to improve additive manufacturing troubleshooting

Silvia Badini^a, Stefano Regondi^a, Emanuele Frontoni^{a,b}, Raffaele Pugliese^a  



 ; Improved G-Code for TPU filament using 0.8mm nozzle to avoid clogging, warping, and stringing

; G-Code generated by Simplify3D(R) Version 4.1.2

; Jun 27, 2022 at 10:56:29 AM

; Settings Summary

; processName,Process1

; applyToModels,DogBone_TypeIV_Prof

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; profileVersion,2022-06-22 12:35:47

; baseProfile,Sharebot NG Dual(2)(2)

; printMaterial,TPU

; printQuality,High

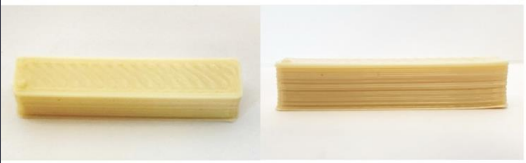
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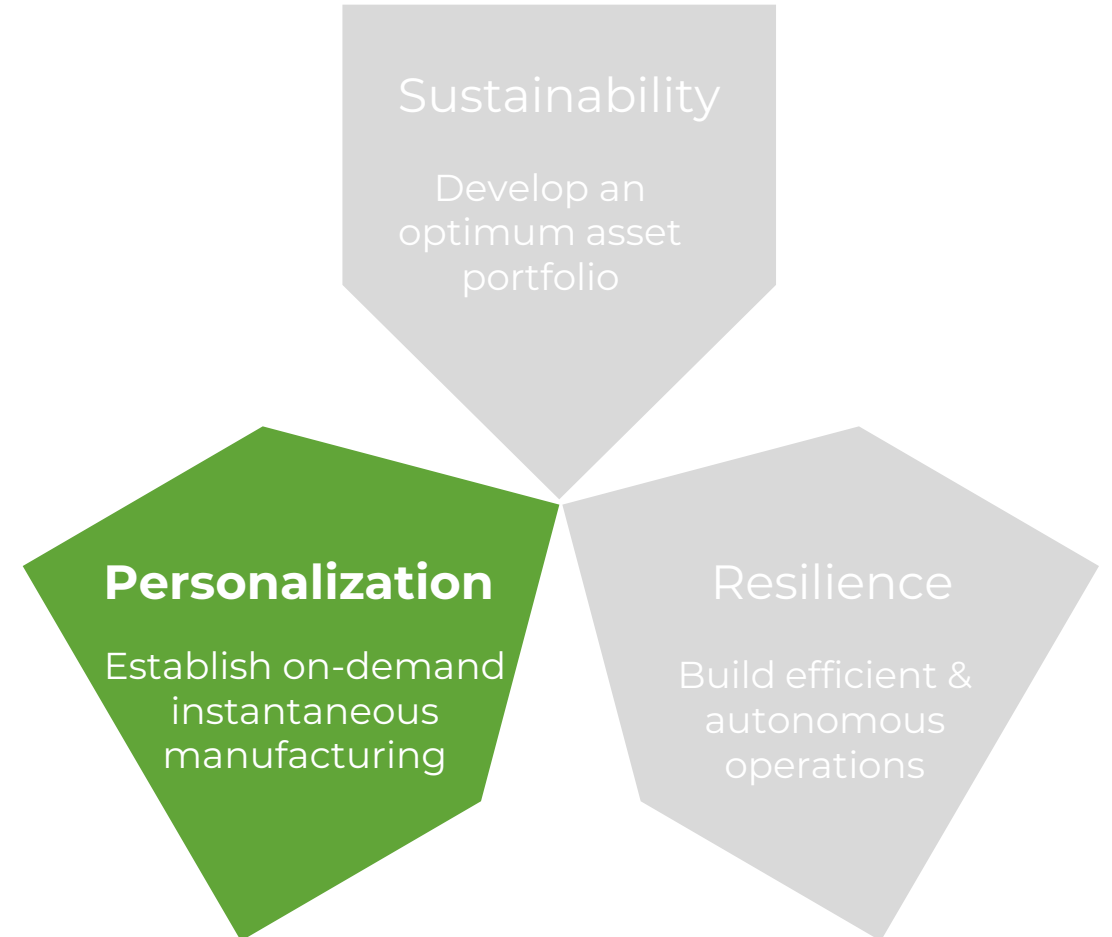
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; extruderToolheadNumber,0

; extruderDiameter,0.8

; extruderAutoWidth,1





GPT-4: The emerging CXO

Questions?

The emerging CSO?

Sustainability

Develop an optimum asset portfolio

Personalization

Establish on-demand instantaneous manufacturing

Resilience

Build efficient & autonomous operations

The emerging CIO?

The emerging COO?

GPT-4: The emerging CXO

WHAT DOES THIS MEAN
FOR YOUR ROLE?

The emerging CSO?

Sustainability

Develop an optimum asset portfolio

Personalization

Establish on-demand instantaneous manufacturing

Resilience

Build efficient & autonomous operations

The emerging CIO?

The emerging COO?

Key Takeaways

1

Manufacturing floors will likely need a decade to perceptibly deploy GPT as we port algorithms to specific applications, integrate GPT with legacy applications, and gain workforce acceptance. Product development and marketing functions will see faster uptake (say, 3–5 years) as we ascertain model outputs and build confidence.

2

C-level roles will shift with CXOs having to increasingly rely on their intrinsic creativity — especially while addressing first-of-a-kind complexities during times of crisis. The mediocre CXO will struggle to find relevance.

3

As GPT-4 permeates industry, CXOs will have to rethink organizational structure as they optimize assets and capabilities — trying to balance quick wins from generative AI while navigating potential long-term erosion of human ingenuity in the workplace.

Thank you

A link of the webinar recording will be emailed within 24–48 hours.

UPCOMING WEBINARS

AUGUST 10

[Decarbonization of Industry: Mapping Progress on the Lux Carbon Canvas](#)

AUGUST 15

[Evaluating Technologies for CO₂ Removal and Building a Robust Carbon Offset Strategy](#)

AUGUST 22

[Building a Net-Zero Oil and Gas Company](#)



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Deciding
Factor