

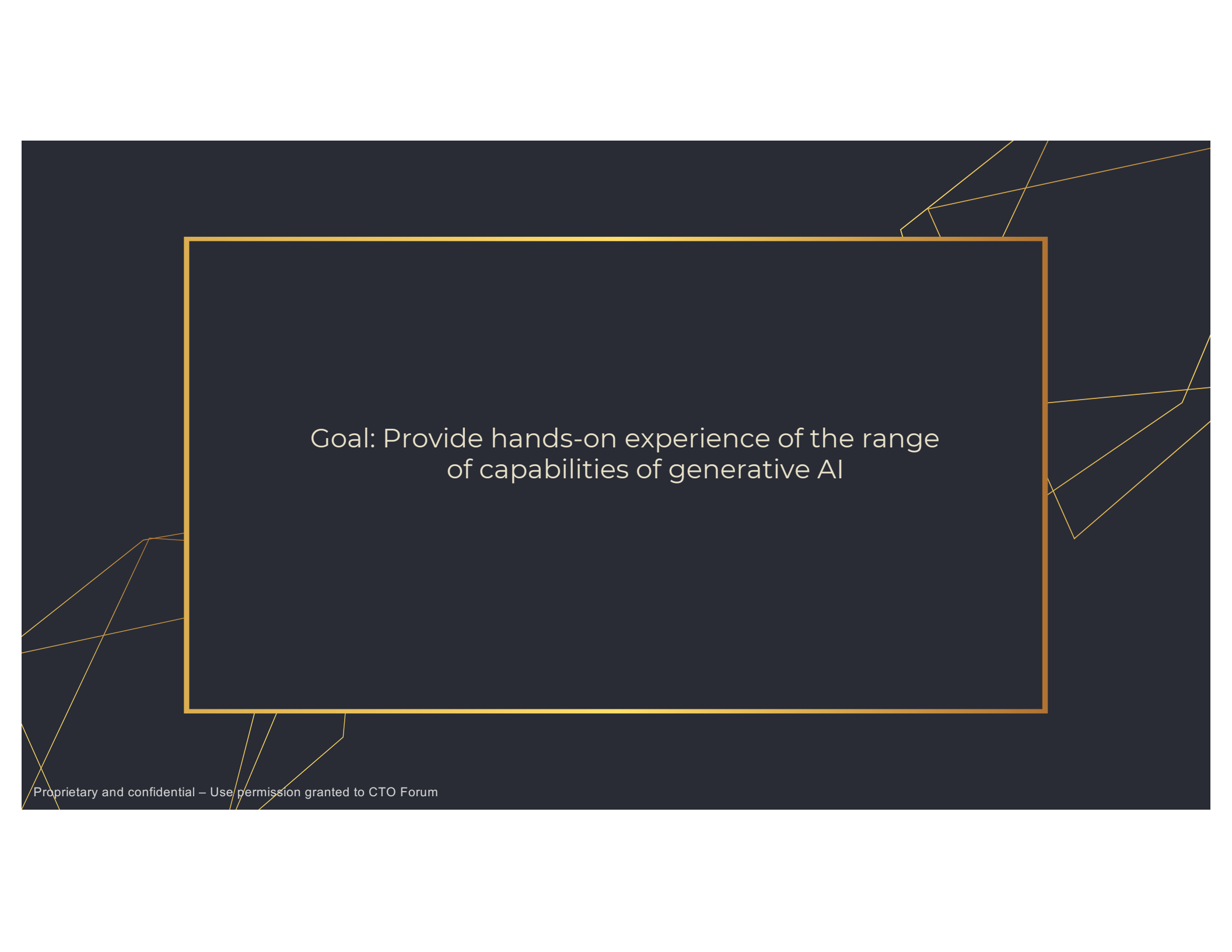
CTO Forum

Gen AI Experiential Workshop

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TOM, HBS

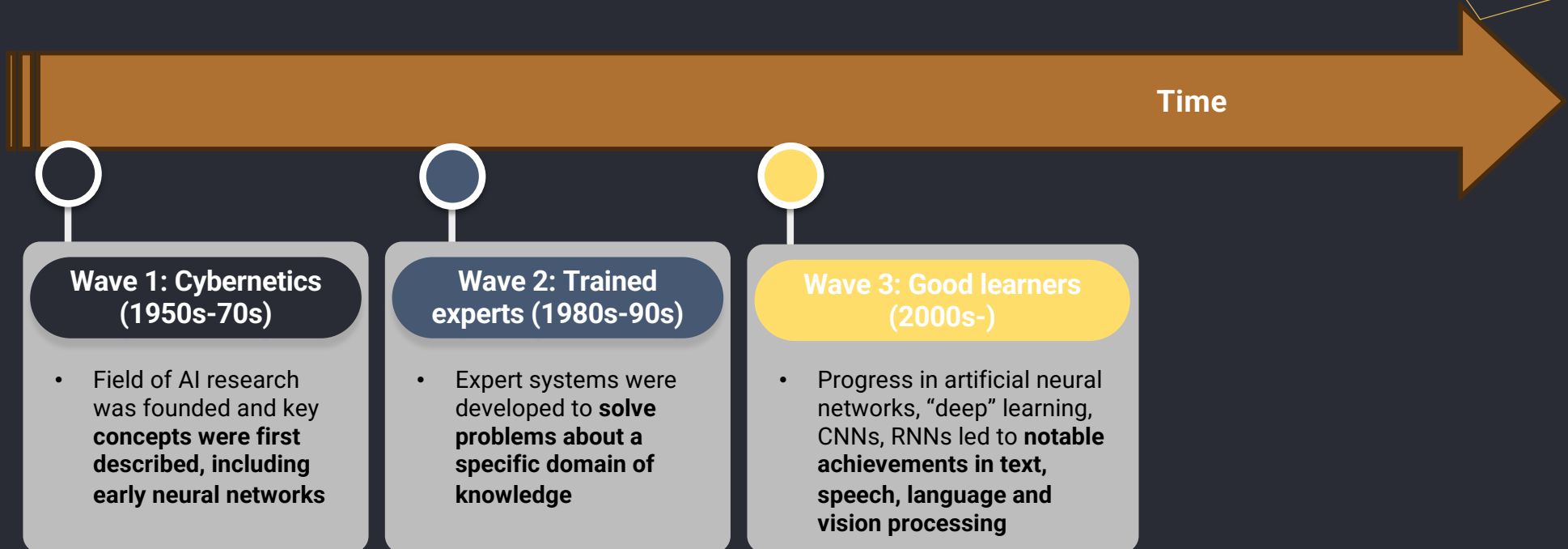
4 Questions

- 1 Who has used Gen AI tools (like ChatGPT, Perplexity, etc.) before?
- 2 Who uses Gen AI tools (like ChatGPT, Perplexity, etc.) once a week?
- 3 Who uses Gen AI tools (like ChatGPT, Perplexity, etc.) every day?
- 4 Who thinks Gen AI will fundamentally impact their work / HBS in the next 3 years?

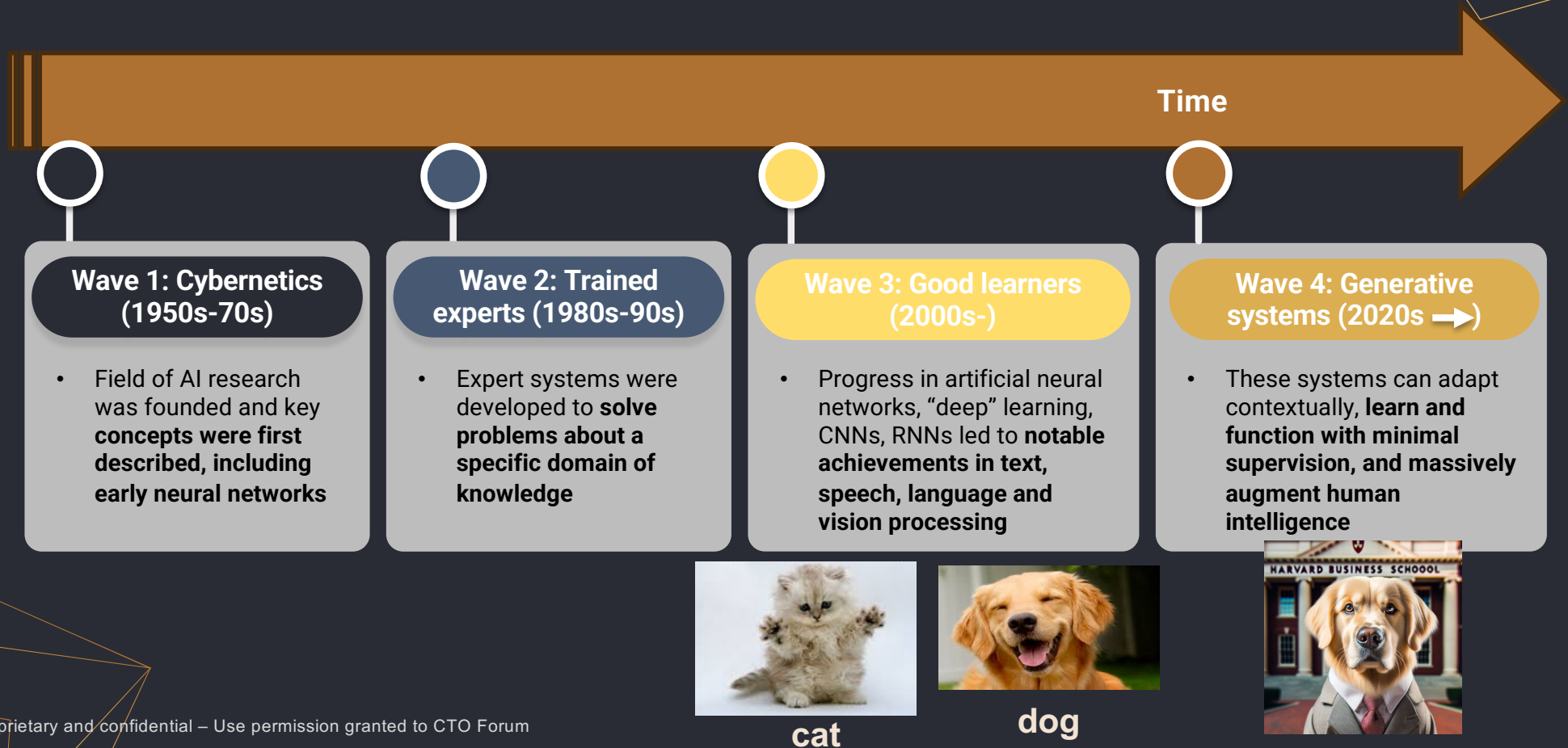
The background of the slide is a dark navy blue. It features several thin, light gold lines that intersect to form various geometric shapes, including triangles and polygons, scattered across the slide. A prominent gold rectangular border frames the central text area.

Goal: Provide hands-on experience of the range
of capabilities of generative AI

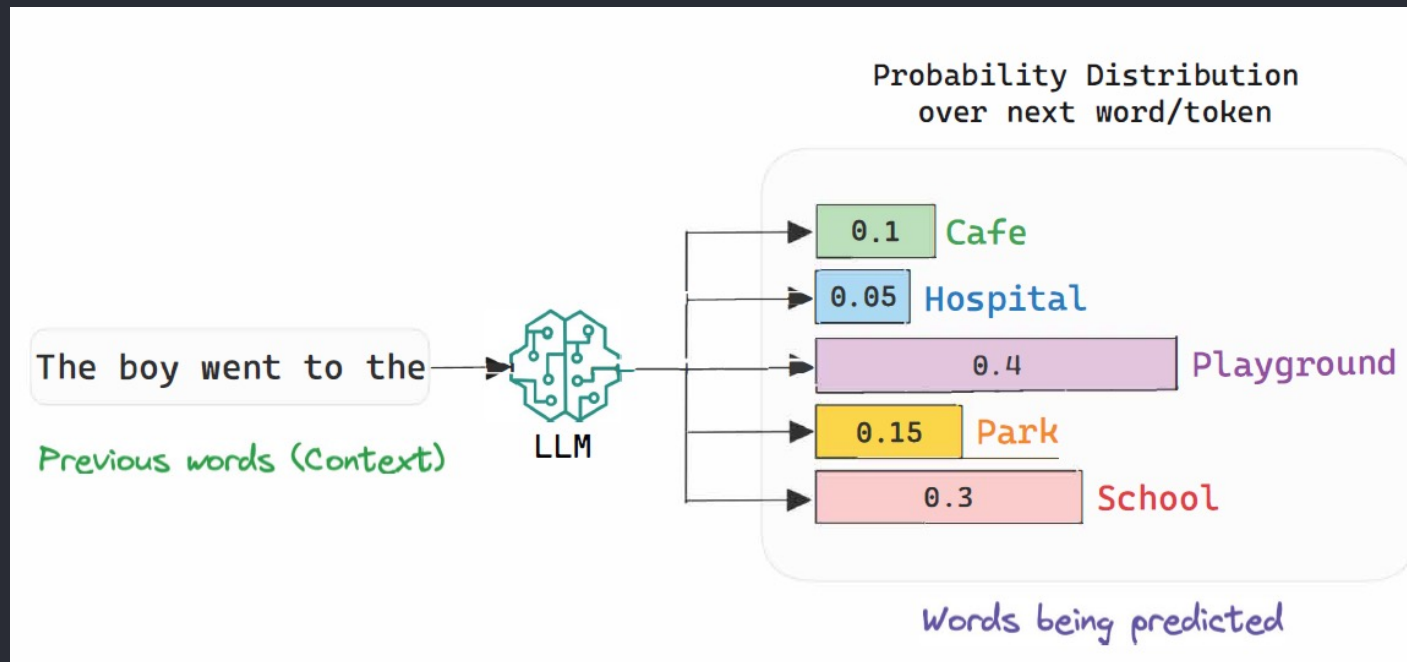
AI Innovation Has Progressed In Waves



AI Innovation Has Progressed In Waves



What does Generative AI do?





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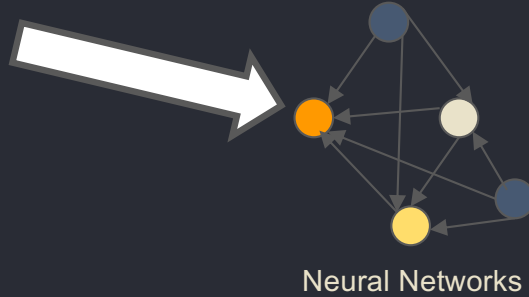


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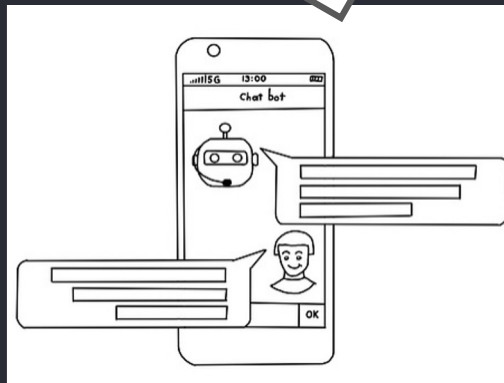
How does Gen AI Learn?



Training dataset containing texts, audios, and videos



Neural Networks

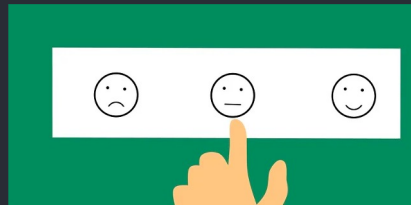


Humans "act" as a bot

1. *Generative Pre-trained Transformers or GPTs* are neural networks that learn context and meaning by tracking relationships in data like the words in this sentence.

How does Gen AI Learn?

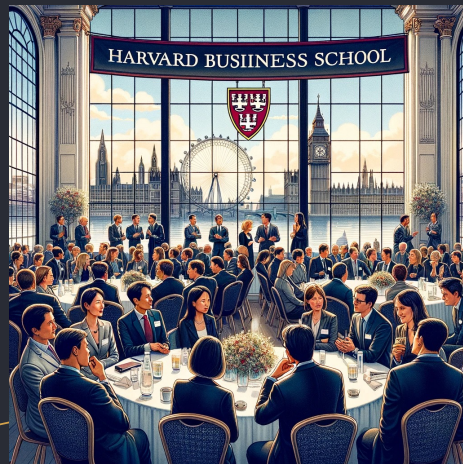
3. *Reinforcement Learning from Human Feedback* is used to further align the algorithm's output with our expectations by having the algorithm generate alternative responses that are ranked from best to worst by a human.



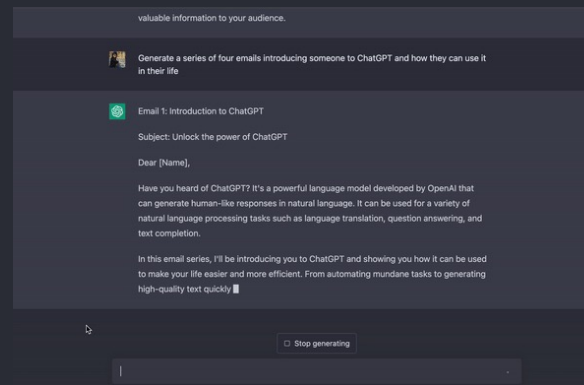
Bot outputs multiple responses
and humans rank them

What can Gen AI do?

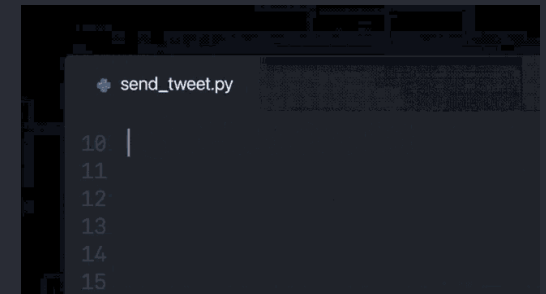
Generate Images,
Video, Sound



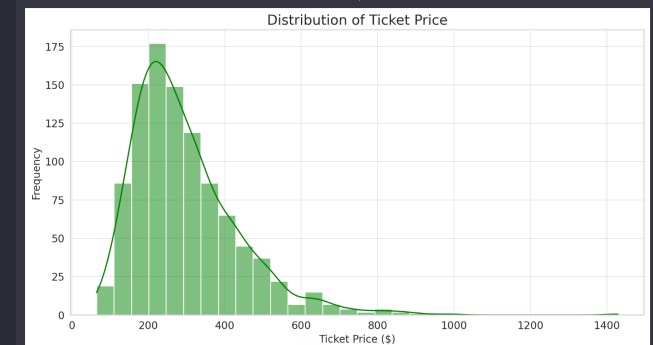
Generate Text



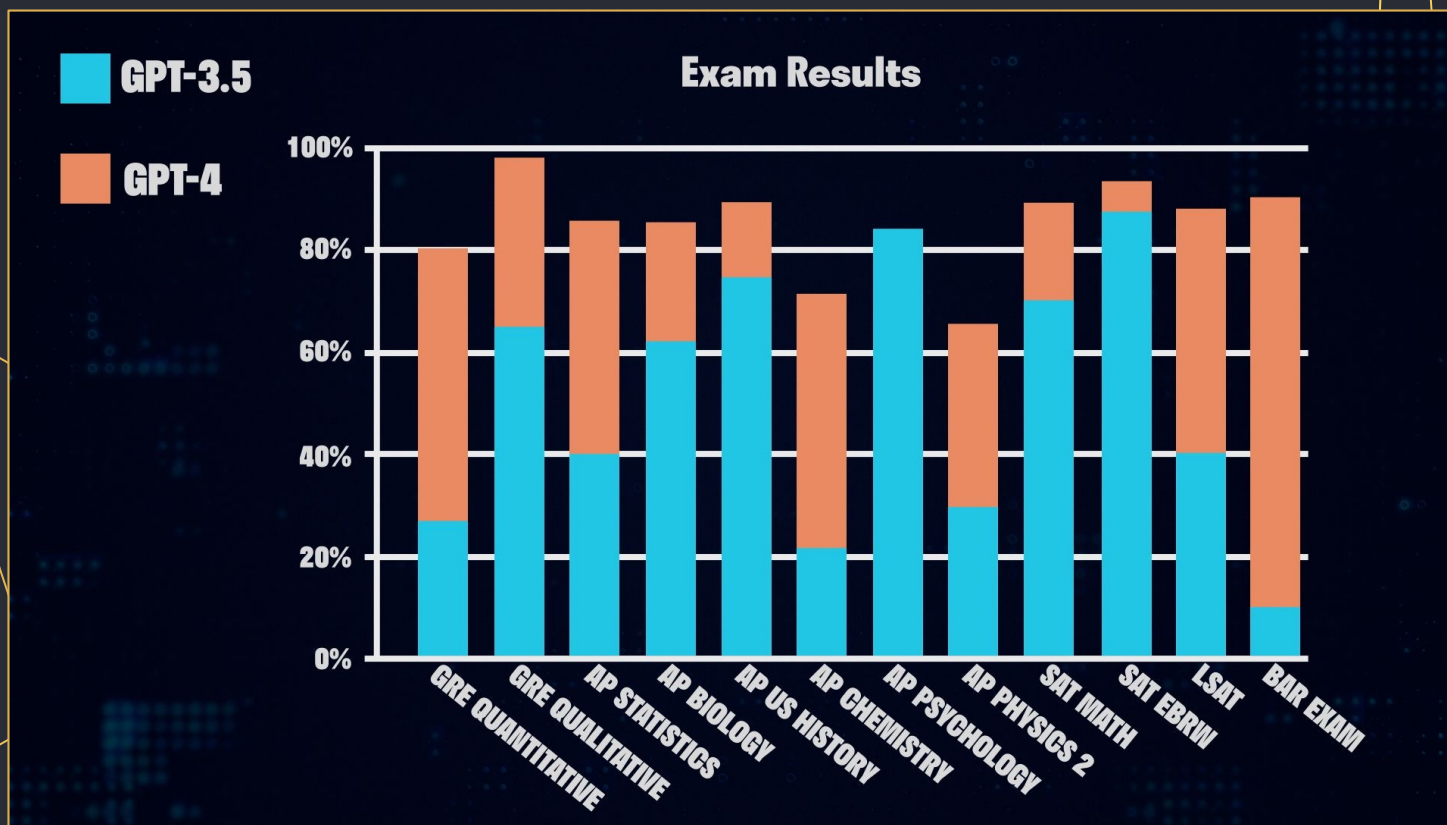
Generate Code



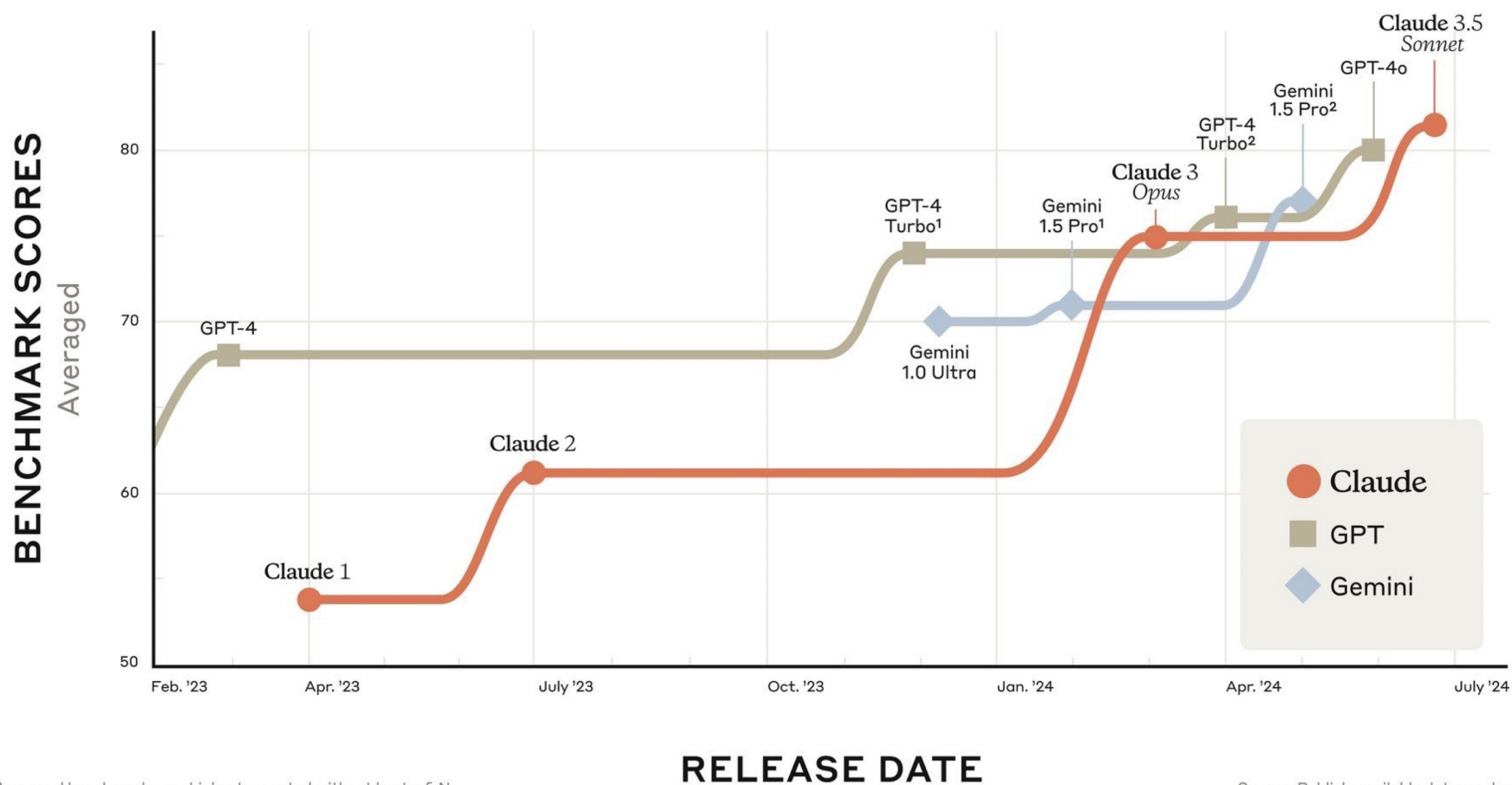
Next, let's take a look at the distribution of the ticket prices. [↩]



General Capabilities



AI model release and capabilities timeline



Averaged benchmarks are highest reported without best-of-N:
MMLU, GPQA, MATH, MGSM, DROP F1, HumanEval pass@1,
MMMU, AI2D, ChartQA, DocQA, Mathvista

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Source: Publicly available data; evaluation scores are
the average of representative scores found online.
1 = Initial release; 2 = Second release

Text to Music & Video

Song generated from **Udio**:

Prompt: Create a song about the transformative power of AI in businesses. The lyrics should highlight the benefits and potential of AI, emphasizing its role in enhancing efficiency, innovation, and growth. The song should mention the four key steps of an AI project: Project Selection, Development, Evaluation, and Adoption. The tone of the song should be inspirational and motivating, encouraging businesses to embrace AI for a brighter future. Include a catchy chorus that reinforces the message of AI driving success. , hip hop,

Video generated from **Plazma Punk**
Prompt: None



Text to Video Capabilities:

Lowering the Cost & Time of Production for Marketing & Learning

Prompt: A stylish woman walks down a Tokyo street filled with warm glowing neon and animated city signage. She wears a black leather jacket, a long red dress, and black boots, and carries a black purse. She wears sunglasses and red lipstick. She walks confidently and casually. The street is damp and reflective, creating a mirror effect of the colorful lights. Many pedestrians walk about.



Source: OpenAI

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Let's make her sing

<https://humanaigc.github.io/emote-portrait-alive/>



Let's put video and music together

@notiansans
+ Runway



Early evidence: Impact of Gen AI



Productivity & Quality

- **50%** faster coding
- **20-40%** less time on writing tasks
- **40%** increase in quality of writing
- **15%** faster AI development
- **14%** increase in productivity for customer support staff



Creativity

- Most studies show no/little measurable effects on creativity but less
- BUT increase in standardization



Education

- **43%** boost in output quality for lower end, 17% for the top
- **34%** increase in productivity of the newest employees
- Disseminate knowledge

Bojinov et al. The Impact of Generative AI on AI development (working paper)
Brynjolfsson, Erik, Danielle Li, and Lindsey R. Raymond. Generative AI at Work. No. w31161.
Dell'Acqua, Fabrizio, et al. "Navigating the jagged technological frontier: Field experimental evidence of the effects of AI on knowledge worker productivity and quality."
Noy, Shakked, and Whitney Zhang. "Experimental evidence on the productivity effects of generative artificial intelligence." Available at SSRN 4375283 (2023).
Peng, Sida, Eirini Kalliamvakou, Peter Cihon, and Mert Demirer. "The impact of ai on developer productivity: Evidence from github copilot." arXiv preprint arXiv:2302.06590 (2023).

Translation challenge

Lack of adoption


Little trust in the AI
Poor understanding of
the capabilities

Little/no process redesign

Full impact requires
changing how we
work

Hard to measure real- world impact

Tricky to experiment
and measure KPIs

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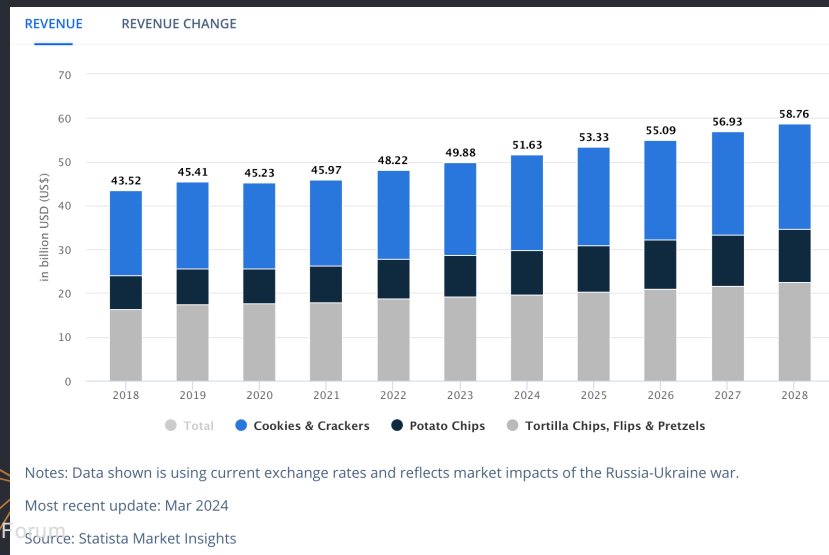
Start with a focus on
education & understanding
some of the capabilities

Snack Industry

USA Rev +\$50B
Expected to grow 3-4% CARG.

Years long R&D process
New products can take anywhere from 2-4 years

Months long marketing
Typically, takes 6-12 months to launch a product




Creating AI-first snack company

1. Analyze current trends + identify an opportunity
2. Create a name, logo, and packaging prototype
3. Generate a recipe that scales
4. Identify customer segment and location of the initial launch
5. Create a targeted marketing campaign
6. Summarize the discussion & create a power point slide to pitch your company!



Prompt Engineering

01	02	03	04	05	06	07
Clarity & Specificity	Context & Intent	Instructional Prompts	Feedback Loops	Chain of Thought	Shot Prompting	Personas
Use precise language to avoid ambiguity.	Include why / for what purpose you're asking.	Give clear commands or steps to follow.	Prompt for iterative refinement or confirmation.	Encourage disclosure of detailed reasoning process.	Provide an example of the desired type of data or output.	Assign a character or role to the AI.



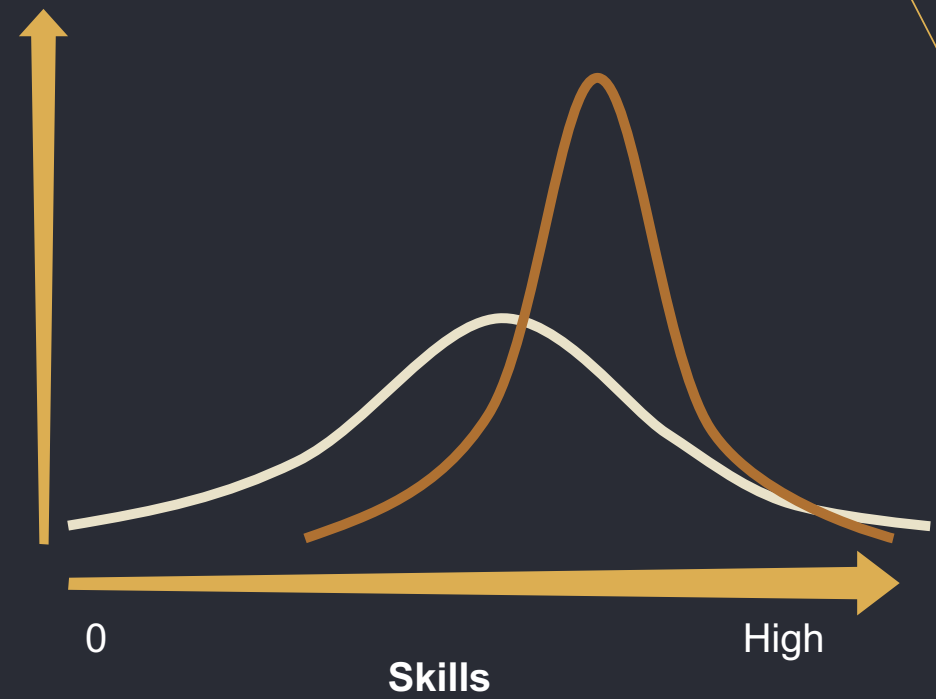
Reflections:
What are you going to do differently?
What are you excited about?
What are you worried about?

Impact on workers?

Augmentation

Automation

Transformation



1. Gen AI will catalyze foundational shifts in business and operating models
2. Every person must prepare to embrace AI and find ways to use it in their work



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Developing a Digital & Experimentation Mindset

Adopt behaviors that open new possibilities:

- Curiosity & Openness
- Experimentation & Learning
- Testing & Iterating

Chart your path to success:

- Determine the application in your role
- Start with productivity-boosting
- Then, focus on process redesign

If you were building your company today
(with the technology that we have), would
your business and operating models be the
same?

The slide features a dark navy blue background. In the top-left and bottom-left corners, there are abstract, overlapping geometric shapes formed by thin, light gold lines. A similar set of these abstract shapes is located in the top-right corner. The text "Thank you!" is centered in the middle of the slide in a light gold, sans-serif font.

Thank you!