AI and BYU

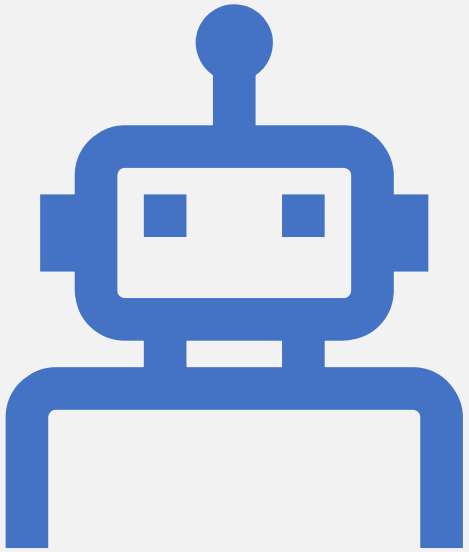
David A. Wood

Brigham Young University

davidwood@byu.edu

Prophetic Direction

Innovations such as artificial intelligence have the potential to both (1) assist you in receiving magnificent blessings and (2) diminish and suffocate your moral agency…Please do not allow the supposed accuracy, speed and ease of modern technologies to entice you to avoid or circumvent the righteous work that invites into your life the blessings you will need.

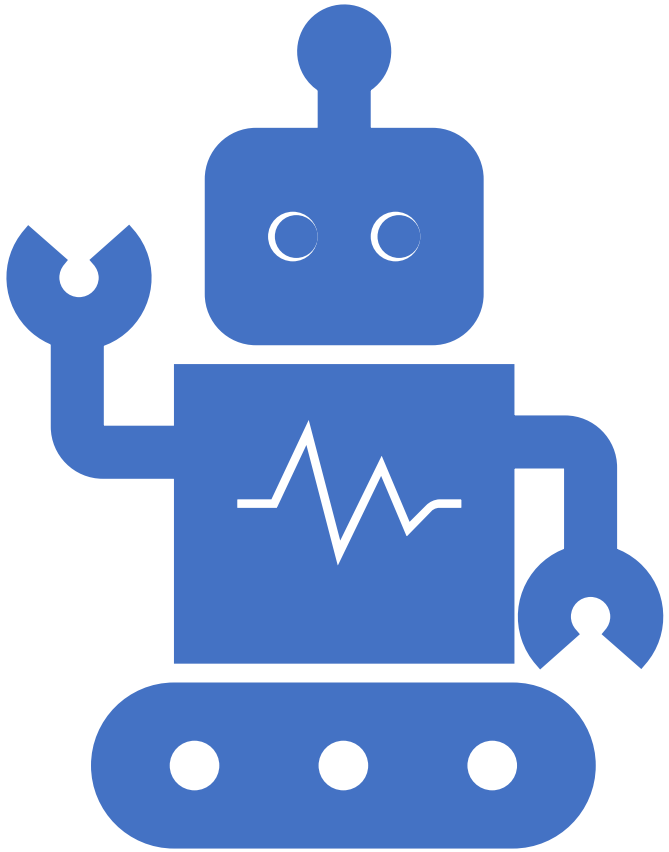


Quick definitions

- Artificial Intelligence (AI)
- Generative AI (GENAI)
- Multimodal Model
- Large Language Models (LLMs)
- Prompt
- Hallucinations
- Human-in-the-Middle
- RAG Model (Retrieval Augmented Generation)

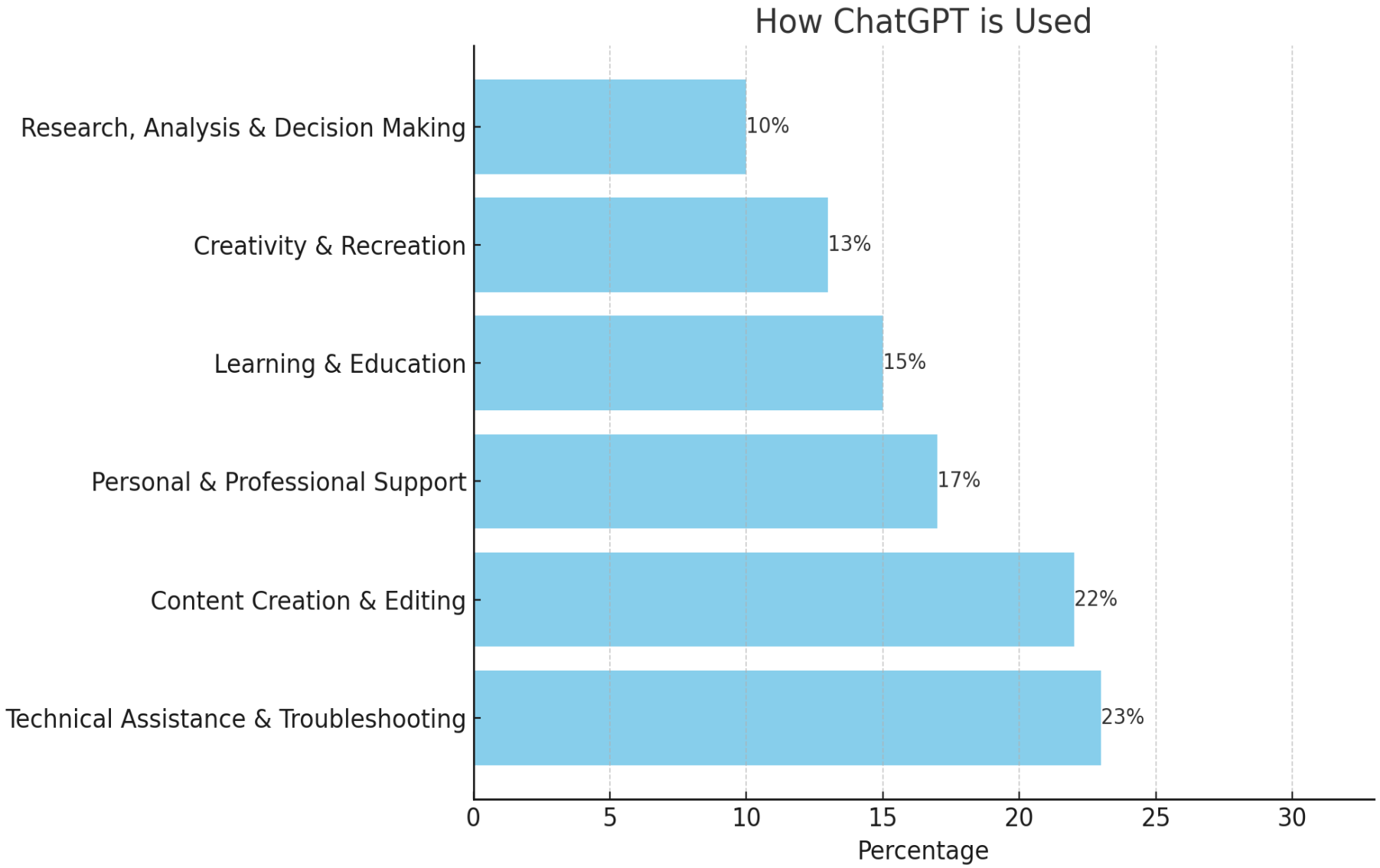
Not Yet…

- Rate of improvement
  - AI performance compute needed to achieve the same outcome has been halving every 8 months (Confidence Interval: 5 to 14 months)
  - Moore’s law for hardware doubles every 2 years



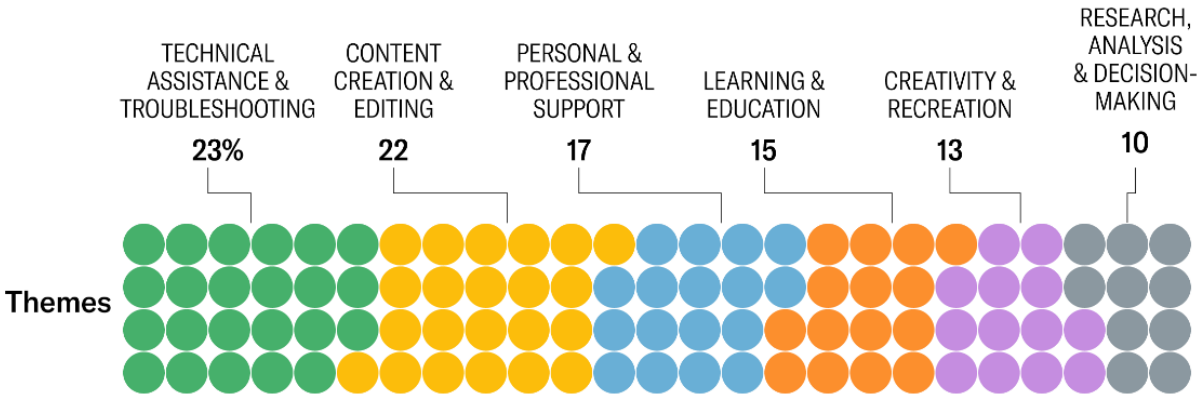
AI Abilities are Doubling every 8 months…

Top uses of ChatGPT



How People Are Using GenAI

Have people found ways for generative AI to help lighten their workloads, increase their productivity, or think through problems in new ways? To understand how individuals are using the technology, researchers mined web forums like Quora and Reddit, filtering through tens of thousands of posts to identify 100 different use-case categories, which they then organized into six themes.



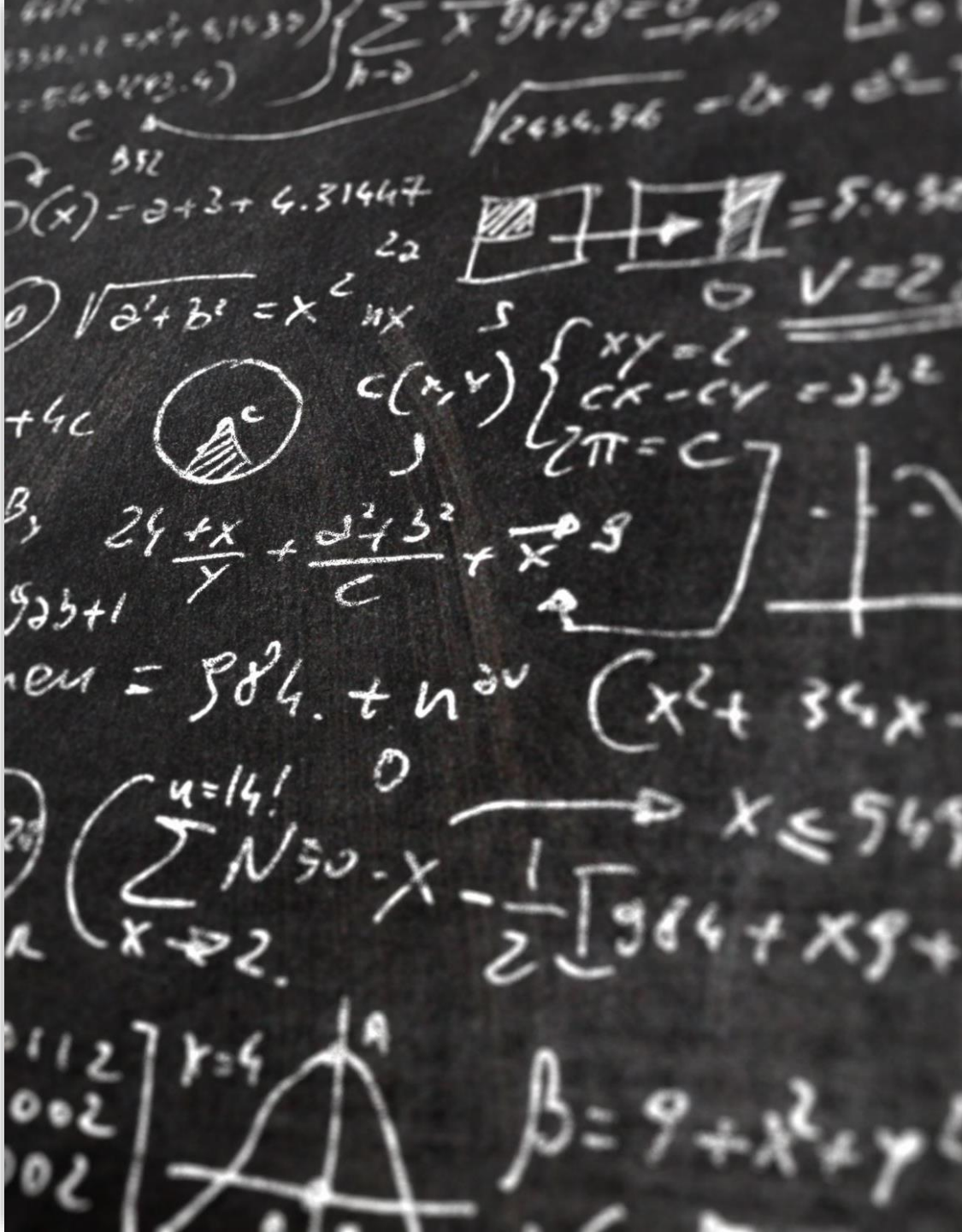
Categories

1. Generating ideas
2. Therapy/companionship
3. Specific search
4. Editing text
5. Exploring topics of interest
6. Fun & nonsense
7. Troubleshooting
8. Enhanced learning
9. Personalized learning
10. General advice
11. Drafting emails
12. Simple explainers
13. Writing/editing CV/résumé
14. Excel formulas
15. Adjusting tone of email
16. Evaluating copy
17. Enhanced decision-making
18. Language translation
19. Improving code (pros)
20. Drafting a document
21. Reconciling personal disputes
22. Summarizing content
23. Making a complaint
24. Recommending movies, books, etc.
25. Cooking with what you have
26. Generating appraisals
27. Creativity
28. Medical advice
29. Generating a legal document
30. Fixing bugs in code
31. Drafting a formal letter
32. Writing & editing a cover letter
33. Personalized kid's story
34. Explaining technical documents
35. Preparing for interviews
36. Critique & counterargument
37. Knowledge checks
38. Coding for amateurs
39. Meeting summaries
40. Cleaning up notes
41. Explaining legalese
42. Spotting logical fallacies
43. Creating a holiday itinerary
44. Editing a legal document
45. Business advice
46. Replying to emails
47. Generating code (pros)
48. Getting past writer's block
49. Generating a lesson plan
50. Rubber ducking (debugging code)
51. Negotiating a deal
52. Fact-checking
53. Career advice
54. Practicing difficult conversations
55. Seeing blind spots
56. Data entry
57. Legal research
58. Writing job postings
59. Strengthening an argument
60. Jumping to the useful info
61. Generating video
62. Safe space to ask
63. Interpreting song lyrics
64. Dungeons & Dragons
65. Generating relevant images
66. Data manipulation
67. Homework
68. Writing social media copy
69. Translating code (pros)
70. Realistic web copy
71. With MS Office apps
72. Understanding movie plots
73. Coding for a basic video game
74. Tracking medical symptoms
75. Healthier living
76. Preparing for meetings
77. Explaining idioms
78. UX/user story writing
79. Suggesting code libraries
80. Writing poems
81. Work buddy
82. Editing video transcript
83. Motivating yourself
84. Packing for travel
85. Sampling data
86. Technical use of software
87. For people with ADHD
88. Ad/marketing copy
89. Special needs education
90. Spotting anomalies
91. Building a business plan
92. Refining prompts
93. For entrepreneurs/startups
94. Building a website/app
95. Writing blog posts
96. Writing a funding proposal
97. Writing a press release
98. Editing digital images
99. Planning workouts
100. Project management

Source: Filtered

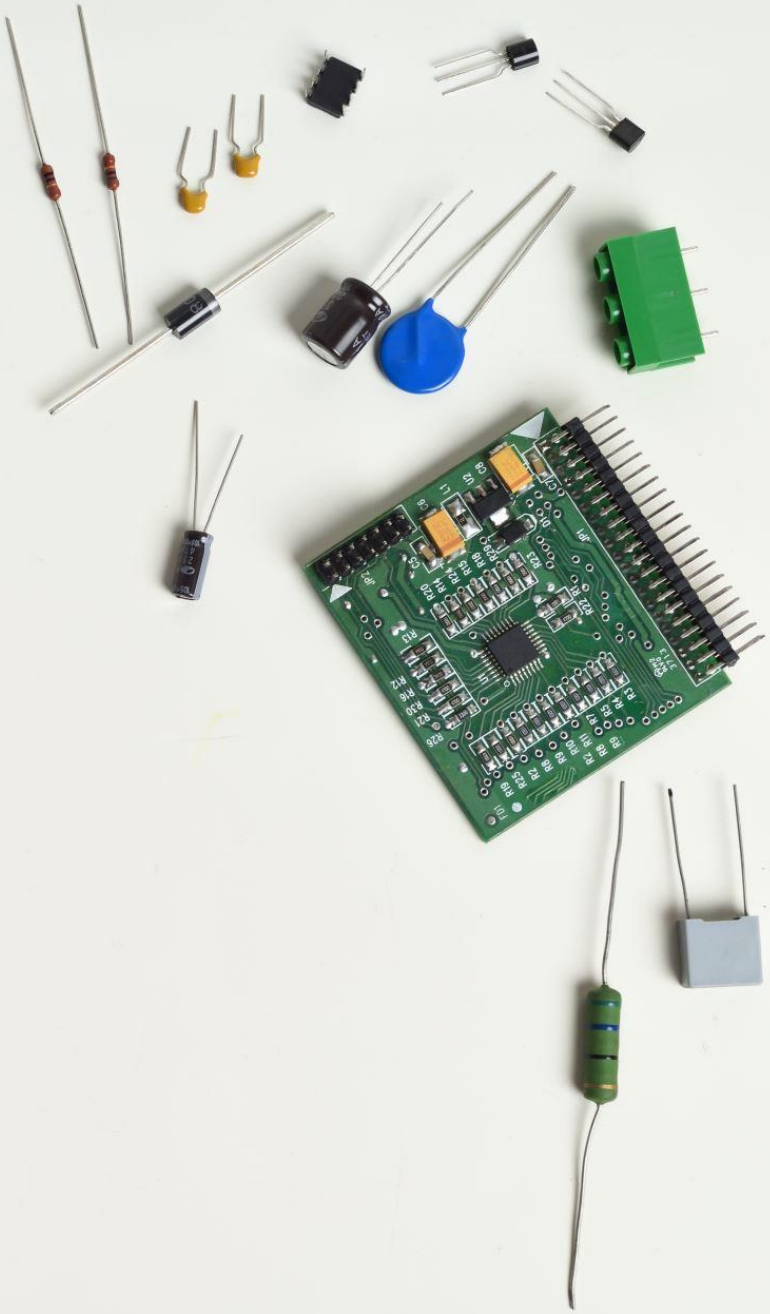
HBR

Examples



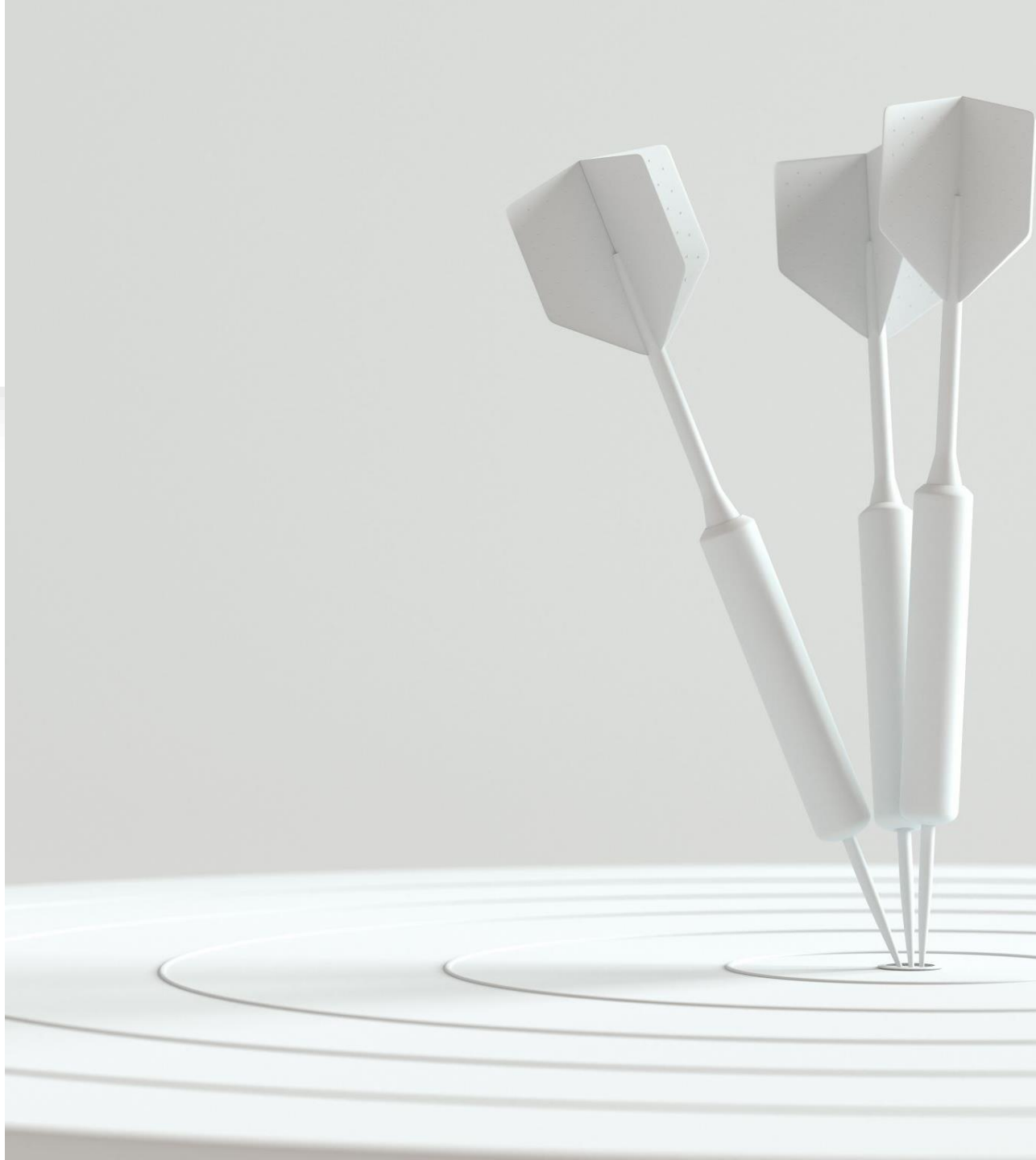
This is not like other IT

- Critical to experiment with the technology
- It is not currently end-to-end, plug-and-play, full automation.
  - It is mostly human-in-the-middle automation, especially in high accuracy areas like accounting



Recommendation

- Form a small team of people that must try using AI each week…or every day. Every one to two weeks they meet and share what worked and what did not work.
- Create a list of what works and doesn’t work to start rolling out to larger group.
- This is a technology for “citizen-developers” not just for IT.



Prompt Library

Soliciting professionals and academics to submit use cases.

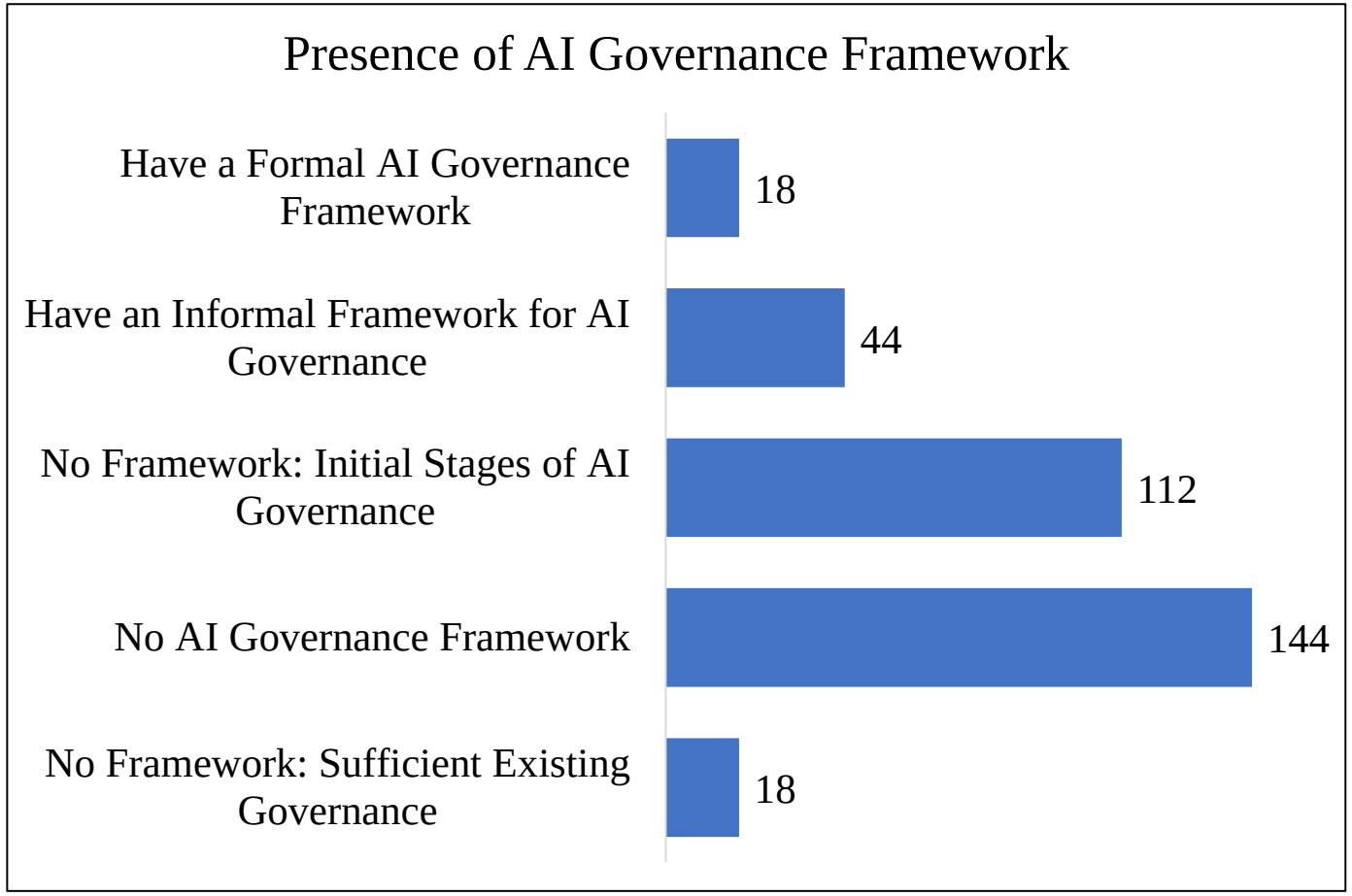
If you want to participate (named or anonymous), please email me at davidwood@byu.edu.

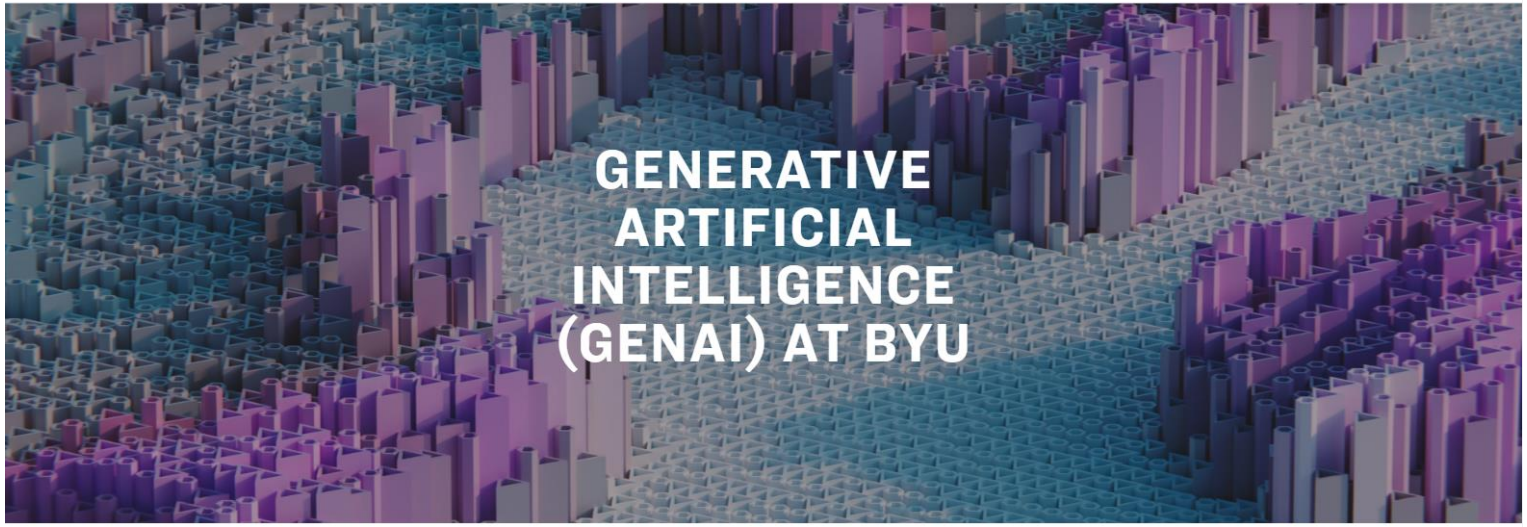
If you participate, I will share the library with you once it is finished.

Need for AI Governance

A total of 336 participants responded to the question “How would you describe your organization’s approach to AI governance?”

Webinar participants came from 314 unique business organizations. Respondent titles included CFO/Controller/Director (115), Manager (80), Analyst/SR/Lead/Supervisor (64), Other (63), and Owner/President/CEO (14).
Respondents came from organizations with the following number of employees 1,000+ (132); 101 to 1,000 (100); 51 to 100 (28); 26 to 50 (20); 11 to 25 (12); 1 to 10 (44).
Respondents indicate they came from industry (184), other (43), accounting services (41), governmental (28), banking/financial services (19), public accounting (8).





Artificial Intelligence, specifically Generative AI (GenAI), is rapidly evolving and becoming increasingly important in our everyday lives. Find out how you can safely and responsibly use Generative AI at BYU.

About GenAI

GenAI Around Campus

Safe Use of GenAI

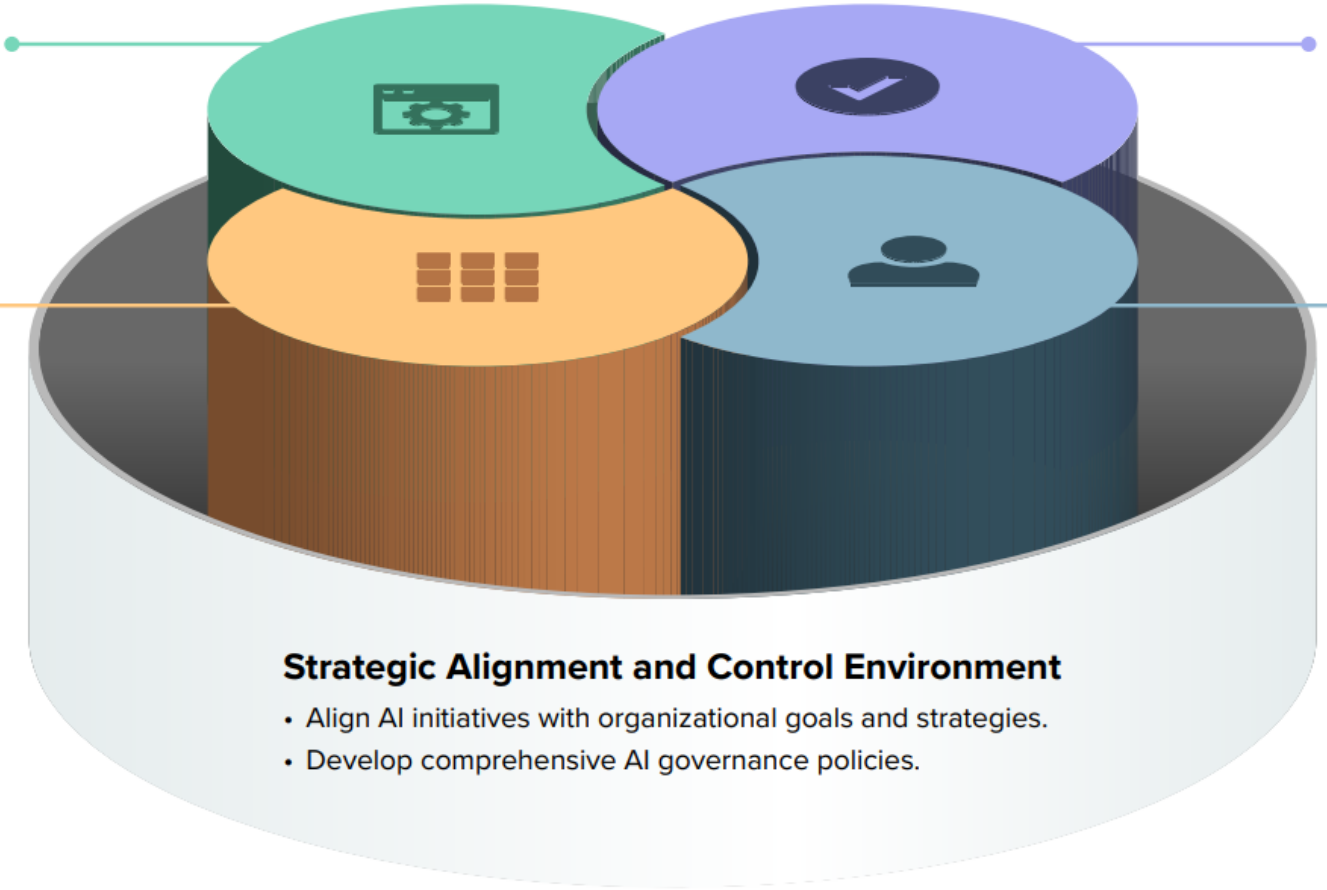
AI Governance Framework

Operational and Technology Management

- Integrate AI into operational processes.
- Manage AI technology and IT security.

Data and Compliance Management

- Establish processes for identifying, assessing, and mitigating data-related risks.
- Ensure compliance with legal, regulatory, and ethical standards.



Transparency, Accountability, and Continuous Improvement

- Transparent and traceable AI decision-making.
- Accountability in AI-driven decisions.
- Continuous improvement of governance practices.

Human, Ethical, and Social Considerations

- Training and HR implications.
- Ethical AI use and bias management.
- Social impact assessments.
- Environmental impact of AI.

Deepfakes

Deepfakes

	Original Footage (used on trained model)	More Realistic Deepfake	Less Realistic Deepfake
Video Excerpt	Link: https://vimeo.com/932941608/0afcb1afcb?share=copy	Link: https://vimeo.com/932266103/b8aa767d6b?share=copy	Link: https://vimeo.com/932265878/bceb63a7ac?share=copy

This is not the future, it is the now…

- Watch video at https://www.youtube.com/watch?v=Sq1QZB5baNw

If any of this interests you, please reach out to me at davidwood@byu.edu
Thank you!