Artificial Intelligence (AI)

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Randy Wormald, EdD (Dr. Worm)

"The future is already here – it's just not evenly distributed"

-William Gibson

Possible Agenda

- Introduction

- FAQs and some baseline information

- Current tools and possible future

- Operational efficiency

- Are we AI-ready? Policy implications.

FAQs and a place to start

- **What is a GPT?**
  - Generative pre-trained transformer

- **What is an LLM?**
  - Large language model is how GPTs are trained.

- **What is AGI?**
  - Artificial General Intelligence

- **What is ASI?**
  - Artificial Superintelligence

GENIUS VS AI (FEB/2024)

	Average human	Terence Tao	William James Sidis	GPT-4	Gemini 1.0 and 1.5
IQ percentile	50th	>99.9th	>99.9th	>99.9th	>99.9th
Languages	2	2	25+	90+	200+
Books read	700	700+	700+	4,000,000+	10,000,000+
Working memory	7 words	9+ words	9+ words	128,000 words	7,000,000 words
Long-term memory	74TB	74TB	74TB	40TB	80TB
SAT score	1050 (50th)	~1460 (97th)	-	1410 (94th)	

LifeArchitect.ai/IQ-testing-AI

Field	Achievement	Result	Outperforms human avg?	Engine	Testing dat
Aerospace	**GPT-4 and GPT-4V can help fly a plane**	-	Yes	GPT-4	Mar/202
Relationships	**ChatGPT converses with 5,239 girls for Russian programmer.**	-	Yes	GPT-4	Feb/202
Academia	**GPT-4 writes better essays than humans**	-	Yes	GPT-4	30/Oct/202
Psychotherapy	**Seligman: "This is a rare moment in the history of scientific psychology: [GPT-4] now promises much more effective psychotherapy and coaching."**	-	Yes	GPT-4	29/Sep/202
Legal	**ChatGPT officiates wedding**	-	Yes	ChatGPT	5/Jul/202
Chemistry	**GPT-4 helps with 'instructions, to robot actions, to synthesized molecule.'**	-	Yes	GPT-4	19/Jun/202
Chip design	**ChatGPT helps design an accumulator, part of a CPU**	-	Yes	ChatGPT	22/May/202
Medical	**ChatGPT 'higher quality' and 'more empathetic' than human doctors**	-	Yes	ChatGPT	28/Apr/202

FAQs and a place to start

- **Tokens and Parameters**
  - **What do those terms mean in AI?**

- **Just for Geeks**

Model	Training end	Chip type	TFLOP/s (max)	Chip count	Wall clock (days)	Total time (years)	Retail (US$)	MMLU
GPT-3 175B	Apr/2020	V100	130	10,000	15 days	405y	$9M	43.9
Llama 1 65B	Jan/2023	A100	312	2,048	21 days	118y	$4M	63.4
Llama 2 70B	Jun/2023	A100	312	*2,048*	35 days	196y	$7M	68.0
Titan 200B	Apr/2023	A100	312	13,760	48 days	1,319y	$45M	70.4
GPT-4 1.7T	Aug/2022	A100	312	25,000	95 days	6,507y	$224M	86.4
Gemini	Nov/2023	TPUv4	275	57,000	100 days	15,616y	$440M	90.0
Llama 3 405B	Apr/2024	H100	989	24,576	50 days	3,366y	$125M	*85+*
GPT-5	*Apr/2024*	H100	989	*50,000*	*120 days*	*16,438y*	$612M	
Grok 2	*Jun/2024*	H100	989	20,000	*50 days*	*6,571y*	$245M	
Olympus	*Aug/2024*	H100	989					
Gemini 2	*Nov/2024*	TPUv6	*1,847*					
Grok 3	*Dec/2024*	H100	989	100,000	*50 days*	*32,855y*	$1.2B	

Table. Model training compute (see working, with sources[8]).

Are you familiar with…

- [ChatGPT](#)
- [Gemini](#)
- [Notebook LM](#)
- [Caktus AI](#)
- [Tactic AI](#)
- [DALL-E](#)
- [Suno](#) (or [Udio](#))
- [SORA](#)
- [Eleven Labs](#)
- [Synthesia](#)

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.

SORA- Creating video from text with Narration from ElevenLabs

Operational Efficiency

The newest apps, email, press releases, strategic planning, audio messages, video messages, social media posts

Artificial Intelligence (Ai) And Other Emerging Technologies

The Merrimack Valley School District recognizes the importance of preparing students for the future by equipping them with the skills necessary to responsibly and ethically use Artificial Intelligence (AI) and other emerging technologies as tools to enhance their learning experiences. When used responsibly, AI can be a powerful tool for efficiency and can be used as a means to foster critical thinking and creativity in students.

We support the responsible, ethical, and transparent use of AI technologies while maintaining the principle of a "human in the loop". The "human in the loop" principle refers to the essential involvement of human supervision, control, and decision-making in conjunction with AI technologies to ensure accountability, accuracy, oversight, and ethical use. This balanced approach between technology and human-centered learning is a key component to nurturing responsible digital citizens.

When appropriate, students are encouraged to use AI tools to aid them in crafting their own original work, demonstrating their learning and understanding, and properly citing and/or documenting AI-generated content when applicable.

The primary goal of using AI in classrooms is to support and enhance teaching and learning, increase student engagement, and provide opportunities for students to develop essential skills needed to prepare them to be future-ready.

Questions or Comments

Feel free to reach out if you have any questions or thoughts about AI.

Randy Wormald, EdD

Superintendent of SAU 46 | Merrimack Valley and Andover

rwormald@mvsdpride.org