

The Power of ChatGPT and Other Chatbot Platforms: A Management Approach and Applicability in RAM

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RAM XVI Training Summit Student Presentation

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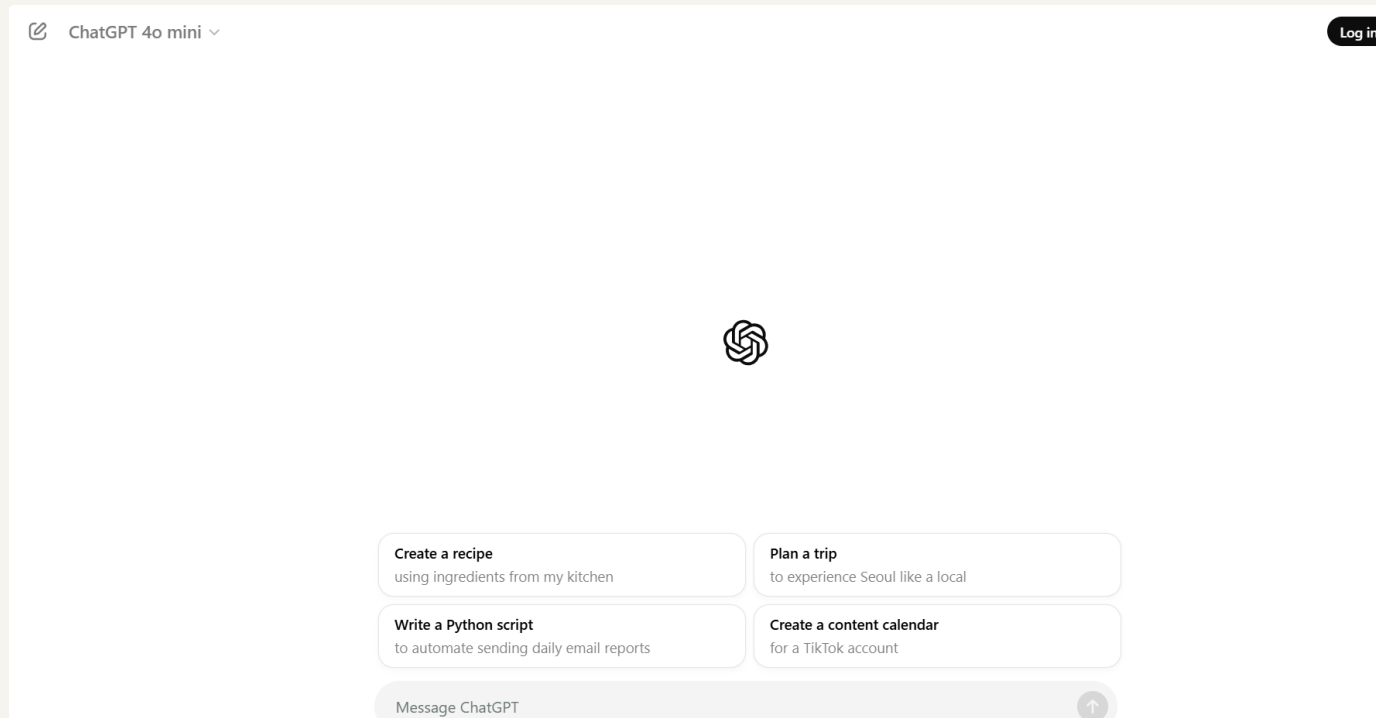
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Meet the Presenter

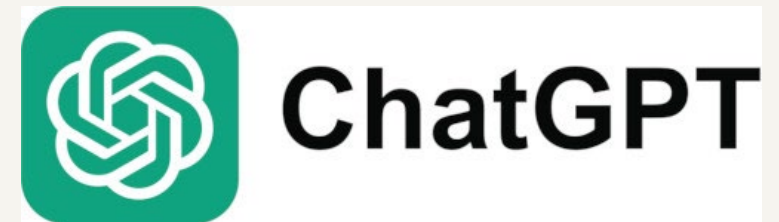
*Jordan Evans, originally from Helena, AL, is a graduate of the University of Alabama (UA) in Tuscaloosa, where she received her B.S. in mechanical engineering in August 2023. As a student, she worked in an undergraduate research laboratory where she studied the mechanical properties of liquid metal to examine how it could be used to make more efficient prosthetic limbs. While at UA, she also acquired a double minor in English and mathematics and served as a writing tutor and consultant for students, faculty, and staff through the UA Writing Center. Post graduation, she is currently employed as a general engineer for the U.S. Army with U.S. Army Combat Capabilities Development Command (DEVCOM) at Redstone Arsenal, where she specializes in reliability engineering to ensure that weapons systems are safe for warfighter use. **Additionally, Jordan is pursuing her MBA at the University of Alabama in Huntsville (UAH), with a concentration in data analytics.** She hopes to use her MBA to bridge the gap between engineering and business, and to gain more insight into how the two fields intersect.*



Presentation Agenda



- 1. Defining ChatGPT**
- 2. ChatGPT Pros and Cons**
- 3. How can a manager oversee the use of ChatGPT at work?**
- 4. ChatGPT and RAM**



<https://chatgpt.com/>

^^above is the link to the free version of ChatGPT; there are a few versions of ChatGPT (*GPT-3.5, GPT-4, browsing-enabled GPT-4, and plugin-powered GPT-4*)

What is ChatGPT?

```
Welcome to
EEEEEE LL      IIII  ZZZZZZ  AAAAA
EE      LL      II     ZZ  AA  AA
EEEEEE LL      II     ZZ  AAAAAA
EE      LL      II     ZZ  AA  AA
EEEEEE LLLLLL  IIII  ZZZZZZ  AA  AA

Eliza is a mock Rogerian psychotherapist.
The original program was described by Joseph Weizenbaum in 1966.
This implementation by Norbert Landsteiner 2005.

ELIZA: Is something troubling you ?
YOU:  Men are all alike.
ELIZA: What is the connection, do you suppose ?
YOU:  They're always bugging us about something or other.
ELIZA: Can you think of a specific example ?
YOU:  Well, my boyfriend made me come here.
ELIZA: Is it important to you that your boyfriend made you come here ?
YOU:  He says I'm depressed much of the time.
ELIZA: I am sorry to hear that you are depressed.
YOU:  It's true. I am unhappy.
ELIZA: Can you explain what made you unhappy ?
YOU:
```



- ChatGPT is an AI chatbot developed by **OpenAI**, a research and development company and nonprofit with the mission to “ensure that artificial general intelligence benefits all of humanity” → future-focused company (OpenAI 2024)

*The first chatbot was **ELIZA**, which was created by Joseph Weizenbaum in 1966; it was the first chatbot that made a meaningful attempt to beat the Turing Test (“History of Chatbots” 2024)*

- ChatGPT was released on **November 30, 2022**. The chatbot has been programmed to interact in a “conversational” way, with the ability to answer follow-up questions, admit to mistakes, and reject inappropriate requests (OpenAI 2024).
- While ChatGPT may be the most used and the most well-known chatbot, some other prominent chatbots today (produced by established companies) include Microsoft Copilot and Google Gemini.



How does ChatGPT work? Here's a generic sample question based on data collection that someone curious about STAR WARS might ask:

Me:

Can you summarize the plots of all 9 Star Wars movies and how they intersect?

ChatGPT:

Absolutely! The Star Wars saga unfolds across nine main films, and its narrative arcs interweave in fascinating ways. Here's a concise summary of each:

- 1.The Phantom Menace:** Introduces young Anakin Skywalker, Jedi Knights Qui-Gon Jinn, and Obi-Wan Kenobi, and sets the stage for the rise of the Sith.
- 2.Attack of the Clones:** Anakin matures, a clone army emerges, and tensions rise as the galaxy edges towards war.
- 3.Revenge of the Sith:** Anakin Skywalker falls to the dark side, becoming Darth Vader, while the Galactic Empire is born and Jedi are hunted to near extinction.
- 4.A New Hope:** Luke Skywalker begins his journey, joining the Rebel Alliance against the Empire, and discovering his heritage as a Jedi.
- 5.The Empire Strikes Back:** The Rebels suffer setbacks, Luke trains with Yoda, and Darth Vader reveals his shocking connection to Luke.
- 6.Return of the Jedi:** Luke confronts Vader and the Emperor, redeeming his father and restoring balance to the Force.
- 7.The Force Awakens:** New heroes Rey, Finn, and Poe Dameron battle the First Order, while searching for the missing Luke Skywalker.
- 8.The Last Jedi:** Rey seeks Jedi training from a reluctant Luke, while the Resistance faces dire straits against the First Order.
- 9.The Rise of Skywalker:** Rey grapples with her identity and heritage, facing the revived Emperor Palpatine and ultimately embracing her role as the last Jedi.

The saga's intersection lies in its themes of redemption, familial legacy, and the eternal struggle between light and dark. Each trilogy contributes to the overarching narrative, exploring the consequences of choices made across generations. It's the ultimate tale of cosmic balance and the enduring power of hope in the face of darkness.





Now onto a more complex example:

ChatGPT uses **Reinforcement Learning from Human Feedback (RLHF)**. Human AI trainers provide conversations in which they play as both the user and the AI assistant. The trainers can access model-written suggestions to help them compose their responses (OpenAI 2024).

This method allows ChatGPT to generate responses to more complex, "human" questions because it is being designed and manipulated by humans.

In summary, while Anakin initially succumbs to the Dark Side driven by fear and desperation, his internal conflict and moments of remorse illustrate his enduring struggle against the darkness within him. His final act of redemption demonstrates that despite his fall, the light side of Anakin Skywalker still remained, ultimately guiding him back to the path of goodness and self-sacrifice.

Me: Did Anakin Skywalker feel remorse after falling to the Dark Side?

ChatGPT can answer more complex questions as well, although they are formulaic and lack any personal insight or anecdotes.

ChatGPT:

Anakin Skywalker's journey after falling to the Dark Side is marked by a complex mix of emotions, including moments of remorse and inner conflict:

Initial Justification: Initially, Anakin turns to the Dark Side out of a desire to save his loved ones from death, particularly Padmé Amidala. He believes the Sith teachings offer powers that can prevent loss and suffering.

Internal Struggle: As Darth Vader, Anakin wrestles with conflicting emotions. He experiences flashes of remorse and guilt, especially when confronted with reminders of his past as a Jedi and his former friends and mentors.

Regret and Reflection: In moments alone or during encounters with his son, Luke Skywalker, Vader shows signs of regret and sadness for his choices. For example, in "Return of the Jedi," he admits to Luke that it's too late for him but urges Luke to resist the Emperor's influence.

Redemption: Ultimately, Anakin's remorse plays a crucial role in his redemption. When faced with the Emperor's threat to Luke in "Return of the Jedi," Vader chooses to save his son, sacrificing himself to destroy the Emperor and fulfill the prophecy of bringing balance to the Force.



Pros and Cons of ChatGPT and Other Chatbots (Leggatt 2023)

Pros

- ChatGPT is increasingly accurate (like any other tool, such as a calculator, MATLAB, an online dictionary, Grammarly and word processors, etc.)
- It performs tasks to a high standard (well-crafted); it can give you ideas, quick overviews, and starting points for projects

It can help someone accomplish a daunting task in a shorter amount of time

It can benefit almost anyone in any industry

Ex. Data collection, analyses, filtering, writing appraisals, brainstorming, etc.

- It is well-suited for businesses that operate across the globe since it can be programmed to respond in multiple languages (increase human capital → expanding horizons)

Cons

- ChatGPT has a limited knowledge base—it has vast reserves of information and data but is limited to events that happened before Sept. 2021
- It makes errors—ChatGPT relies on humans parsing and fact-checking information for accuracy; one can't solely assume that the information provided by ChatGPT is always right
- University professors and educators are worried about the use of ChatGPT and its effect on academic integrity, however, the structure of responses is very formulaic and easy to detect in long-form writing; **there is considerable limitation in its level of sophistication of expression**
- ChatGPT can be used to spread misinformation and has a high scam potential (ignorance is bliss)
- ChatGPT makes work tasks less meaningful and relational (there needs to be a balance between ChatGPT usage and human oversight)
- There is a security risk at a lot of companies when it comes to allowing the use of ChatGPT (ex. the DoD)

ChatGPT Sprints to One Million Users

Time it took for selected online services to reach one million users



* one million backers ** one million nights booked *** one million downloads
Source: Company announcements via Business Insider/LinkedIn



statista

ChatGPT Statistics

(Webb 2023)

- **Popularity**
 - "ChatGPT reached 1 million users within its first days of being launched in November 2022" (Brockman, 2023)
- **Business Booster**
 - "97% of business owners believe ChatGPT will benefit their operations within the next 12 months" (Forbes, 2023)
- **Breaking Down Barriers**
 - "ChatGPT has the capability to understand and generate text in over 26 languages" (OpenAI, 2023)



ChatGPT for Businesses

(Patpatia 2023)

- AI tools such as ChatGPT can help businesses “make data-driven decisions, anticipate market trends, and optimize operations” (Patpatia 2023)
 - Can eliminate burnout by helping employees complete tasks faster/more efficiently
 - *Can give employees readily available information so that they can learn and grow within the company at a faster rate*
- Businesses need to learn how to use the tool most effectively
 - *Training and program planning*
- ChatGPT can be used to revolutionize customer support and improve response time, as well as analyze customer data and offer personalized recommendations
- ChatGPT can also streamline operations by automating routine tasks and allowing the chatbot to handle repetitive inquiries
 - *No one likes being on hold*
- ChatGPT can be used to assist in recruiting efforts
 - *Potential employees like to see a company that isn't afraid to try something new*
- ChatGPT is a great tool for gaining insights and improving decision-making
 - *Good tool for brainstorming sessions and to help organize collaboration efforts*



Balancing ChatGPT and Human Capital in the Workplace

(Patpatia 2023)

- Human oversight and intervention is necessary to address complex or sensitive inquiries—ChatGPT makes mistakes, and is far from perfect
- Before introducing ChatGPT or AI tools to your company, define your company objectives to see how the tool can benefit your company
- Produce training/seminars/Q&A for employees to be aware of how ChatGPT and other chatbots work, and how to use them securely and appropriately

Ensure that no employee, despite their age or background, becomes left out of the loop when introducing new technological tools to your company

- Monitor the performance of ChatGPT and gather user and employee feedback
- Don't be afraid of AI; instead, think of the endless ways that businesses and human capital can be maximized by using this wonderful tool correctly

What is Reliability, Availability, and Maintainability



Reliability

The term Reliability represents the probability that an asset will operate without failure in a given time under strict conditions.



Maintainability

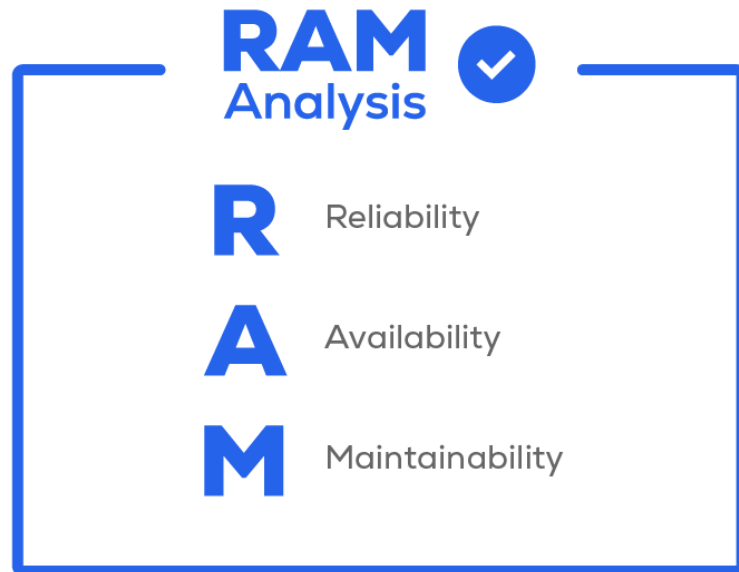
The term maintainability describes how easy and resource intensive it is to perform maintenance on an asset.



Availability

Availability provides the probability that an asset is in operable condition at a given time.

The purpose of RAM analysis is to identify major causes of loss of operational availability or other issues that may limit the production throughput. The end goal is to improve asset design and maintenance programs, optimizing the overall life cycle (LCC) costs of your assets.



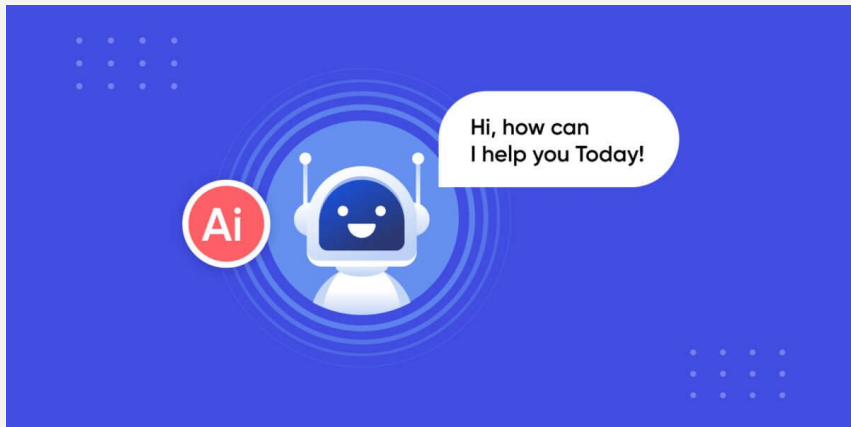
TRACTION

What is RAM?

- "Reliability, Availability, and Maintainability (RAM) are design attributes of a system or an asset" (Christiansen 2024).
- "Collectively, these parameters are leveraged to improve the productivity of the asset over its life cycle by reducing waste, maximizing profit, and ultimately, optimizing its overall life cycle (LCC) costs" (Christiansen 2024).

ChatGPT and RAM

- ChatGPT and other chatbot platforms can benefit RAM by:
 - making it easier/more efficient to sort through data and home in on important information
 - reducing the time spent filtering through data
 - creating summaries of historic documents and reports
 - producing charts and graphs in a fraction of the time that it would take a normal person to do them
 - eliminating repetitive, time-consuming tasks and allowing RAM engineers to focus on more important tasks (a better use of time)
- Just like with introducing a chatbot platform to any business, care needs to be taken into ensuring that the platform is regulated, updated, and that employees know how to use it to get the most out of it.



Works Cited

- Christiansen, Bryan. "Reliability, Availability, Maintainability (RAM) Concept Explained." *Limble CMMS*, 22 May 2024, limblecmms.com/blog/reliability-availability-maintainability-analysis/.
- "History of Chatbots." *Codecademy*, Codecademy, www.codecademy.com/article/history-of-chatbots. Accessed 29 July 2024.
- Leggatt, Johanna. "What Is Chatgpt? A Review of the AI in Its Own Words." *Forbes*, Forbes Magazine, 16 Oct. 2023, www.forbes.com/advisor/in/business/software/what-is-chatgpt/.
- "OpenAI." *OpenAI.com*, openai.com/. Accessed 30 July 2024.
- Patpatia, Niraj. "Council Post: ChatGPT for Business: Pros and Cons, Plus How to Use It Effectively." *Forbes*, Forbes Magazine, 18 July 2023, www.forbes.com/sites/forbesagencycouncil/2023/07/14/chatgpt-for-business-pros-and-cons-plus-how-to-use-it-effectively/.
- Webb, Maria. "30+ ChatGPT Statistics You Need to Know Today - Trends, Usage, and Predictions." *Technopedia*, 5 Dec. 2023, www.techopedia.com/chatgpt-statistics.



Questions?

