Practical Applications of Artificial Intelligence

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NAMM® believe in music

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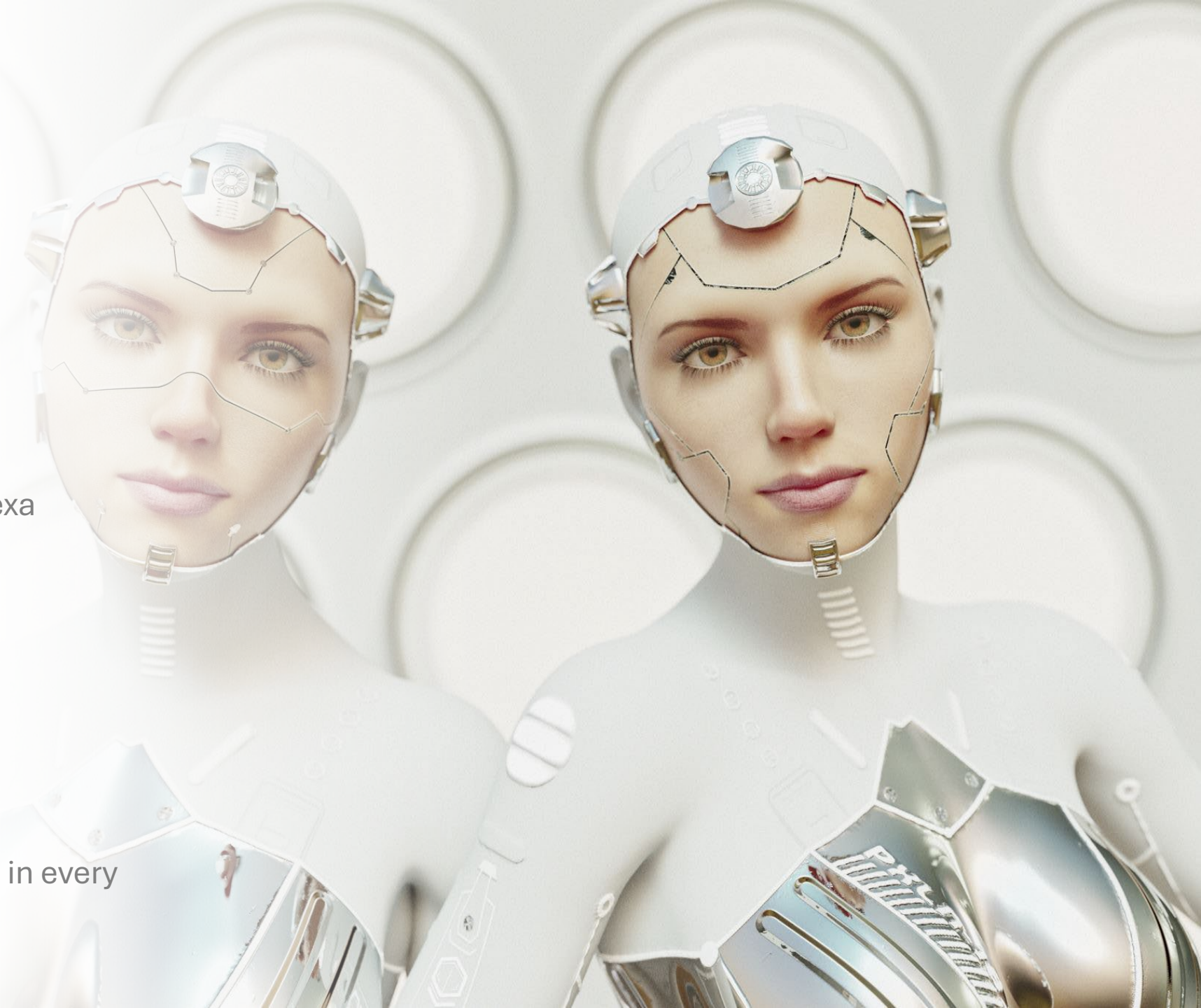
Artificial Intelligence:
What is it and how do we use it

Stages of Artificial Intelligence

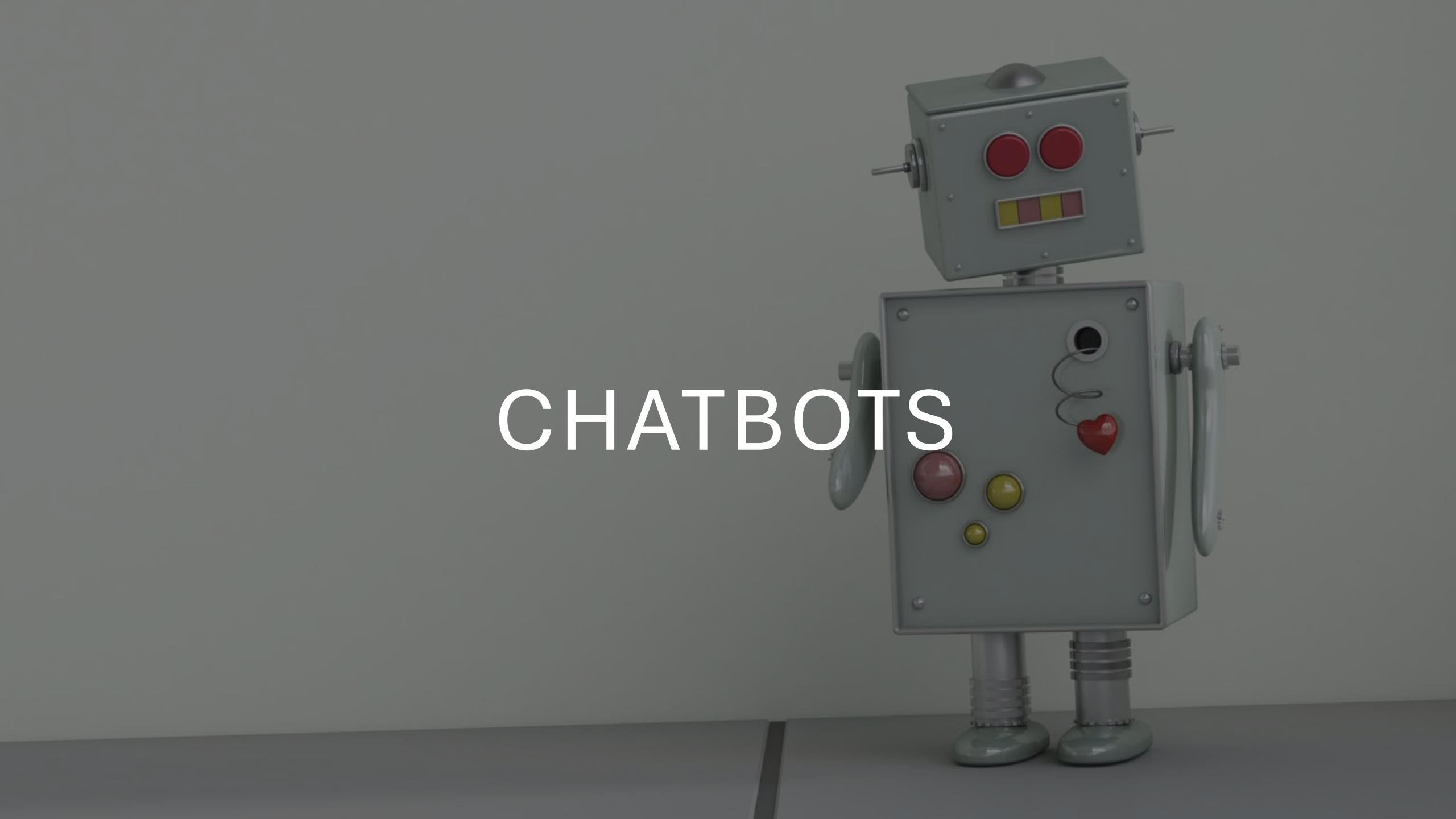
- **Narrow AI – Weak**
  - Performs limited, finite tasks.
  - Ex: Deep Blue, ChatGPT, Siri/Alexa
- **General AI - Strong**
  - Same intelligence as a human.
  - Theoretical
  - Doesn’t exist. Yet…
- **Super AI – Skynet!**
  - Far exceeds human intelligence in every realm.
  - Dystopian.



Today We have Narrow (weak) AI

- Self Driving Cars
- Smart Appliances
- Digital Assistants (Alexa, Siri, Google)
- Text Editors (Grammarly)
- Banking and E-Commerce
- Maps and Travel Apps
- Facial ID
- ChatBots (ChatGPT)

CHATBOTS

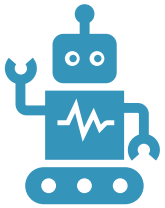


Chatbot Basics

Definition

Software that mimics a conversation with a human being

“Generates” or creates novel content



Also Known As

Generative AI

Large Language Model (LLM)

AI Chatbot

“ChatGPT”
(think: Xerox for copies)

Examples

ChatGPT (OpenAI)

Gemini (Google)

Copilot(Microsoft)

Meta AI (Meta)

More coming weekly

What They Do And Don’t Do

What it does do…

It predicts what the next word should be given based on what words are already there.

What it doesn’t do…

Have its own thoughts or Reason. It is not general AI nor All powerful

LET'S GIVE IT A GO!

Prompt

Be creative

Share out

What can you do with this...

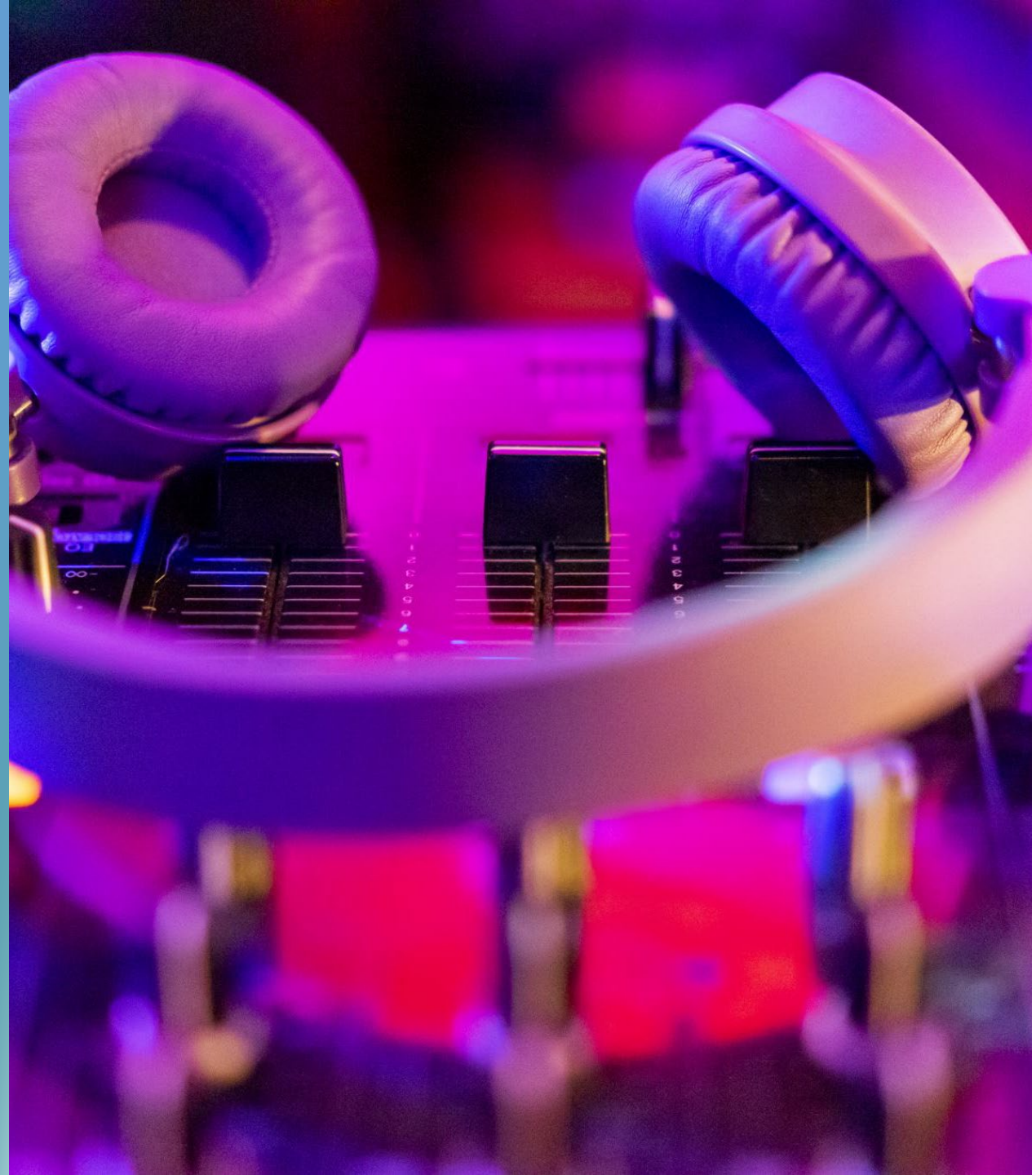
Insert Web Page

This app allows you to insert secure web pages starting with https:// into the slide deck. Non-secure web pages are not supported for security reasons.

Please enter the URL below.

https:// www.mureka.ai/song-detail?share_key=LD7hyy6UKJ23i3cVrnvHwX&is_from_share=1

Note: Many popular websites allow secure access. Please click on the preview button to ensure the web page is accessible.



Tools

- **Suno:** https://suno.com/
- **Soundraw**: https://soundraw.io
- **AIVA**: https://aiva.ai
- **Boomy**: https://boomy.com
- **Amper Music**: https://www.ampermusic.com

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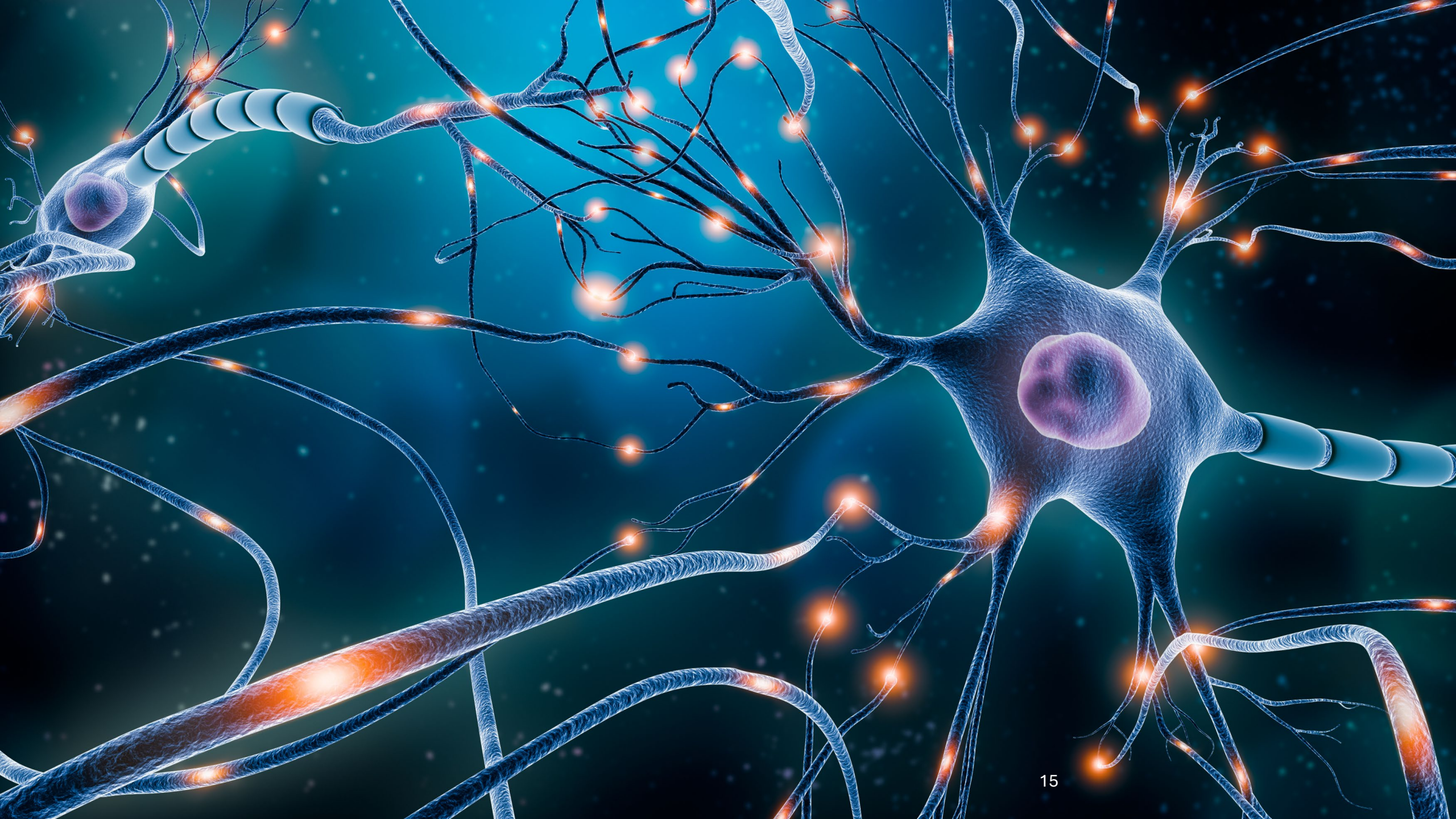
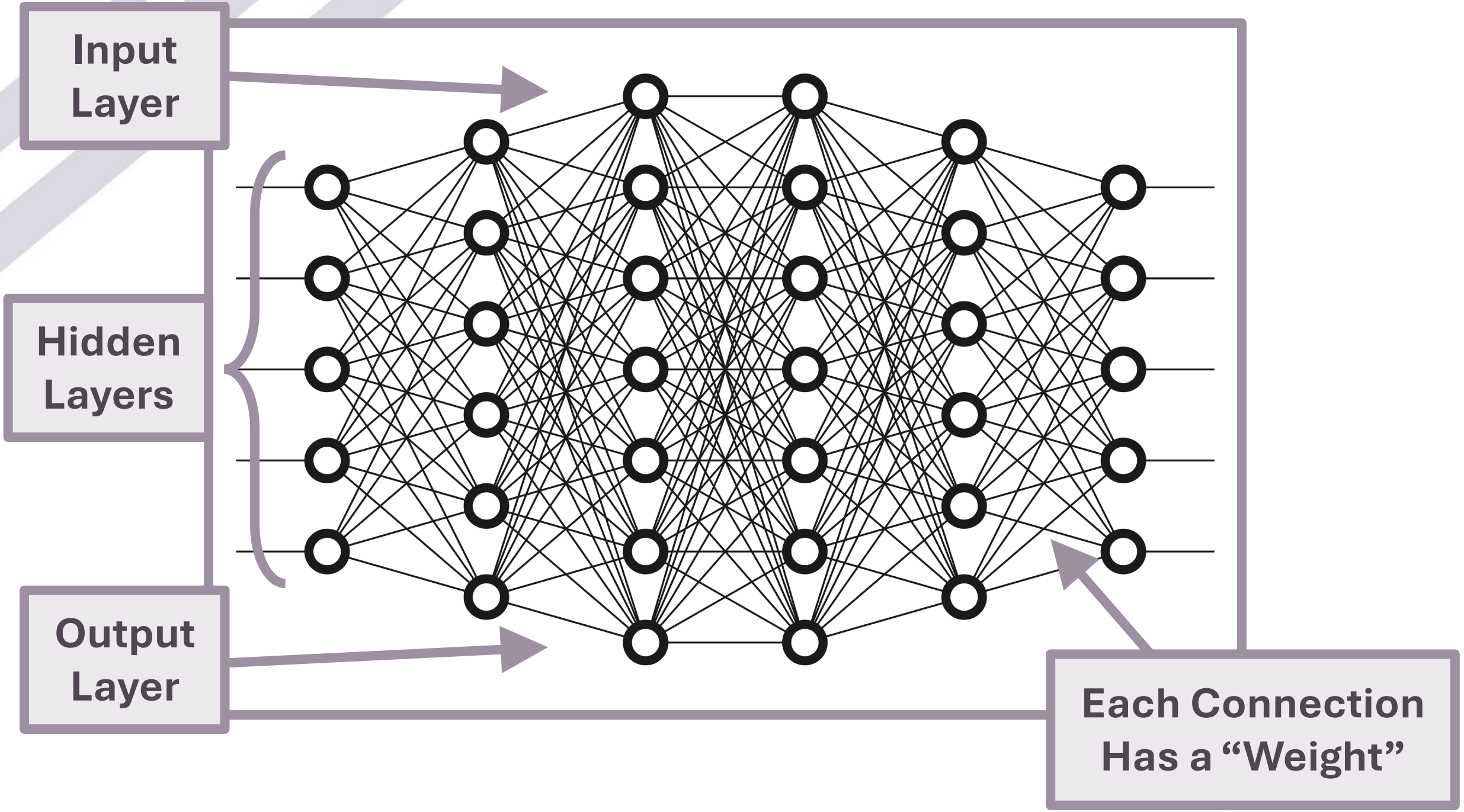
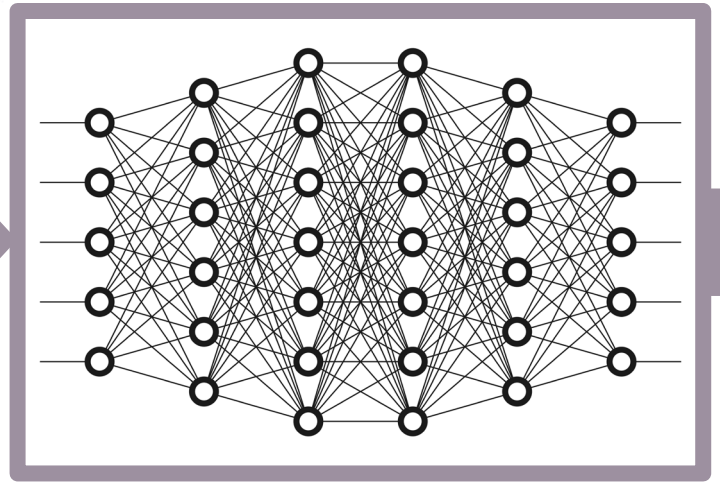



Input Layer
Hidden Layers
Output Layer
Each Connection Has a “Weight”

Billions of Webpages + 500 Million Books



175 Billion Connections with Various Weights

ChatGPT changes the weights of the connections based on that grade so that future responses are more accurate.

End to End Learning via Human Training

Input
A human inputs a query.

Output
ChatGPT generates a response.

Grading
A human grades that response.

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Ethical and Governance Challenges

- **Ethical Considerations:** Responsible AI use, avoiding biases, and protecting privacy.

- **Regulation and Governance:** Developing regulations that balance innovation and public interest.

- **3 Cs to protect creators:** Consent, Credit, and Compensation

Security and Transparency Challenges

- **Security Threats:** Protecting AI systems from malicious attacks.

- **Transparency and Explainability:** Making AI decisions understandable.

Workforce and Data Challenges

- **Job Displacement:** Addressing employment impacts and retraining.

- **Data Privacy:** Protecting data and ensuring compliance with privacy laws.

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Bias, Integration, and Energy Challenges

- **Bias and Fairness:** Mitigating bias for unbiased outcomes.

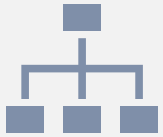
- **Integration with Existing Systems:** Ensuring smooth integration with current infrastructure.

- **Energy Consumption:** Addressing AI's energy demands sustainably.

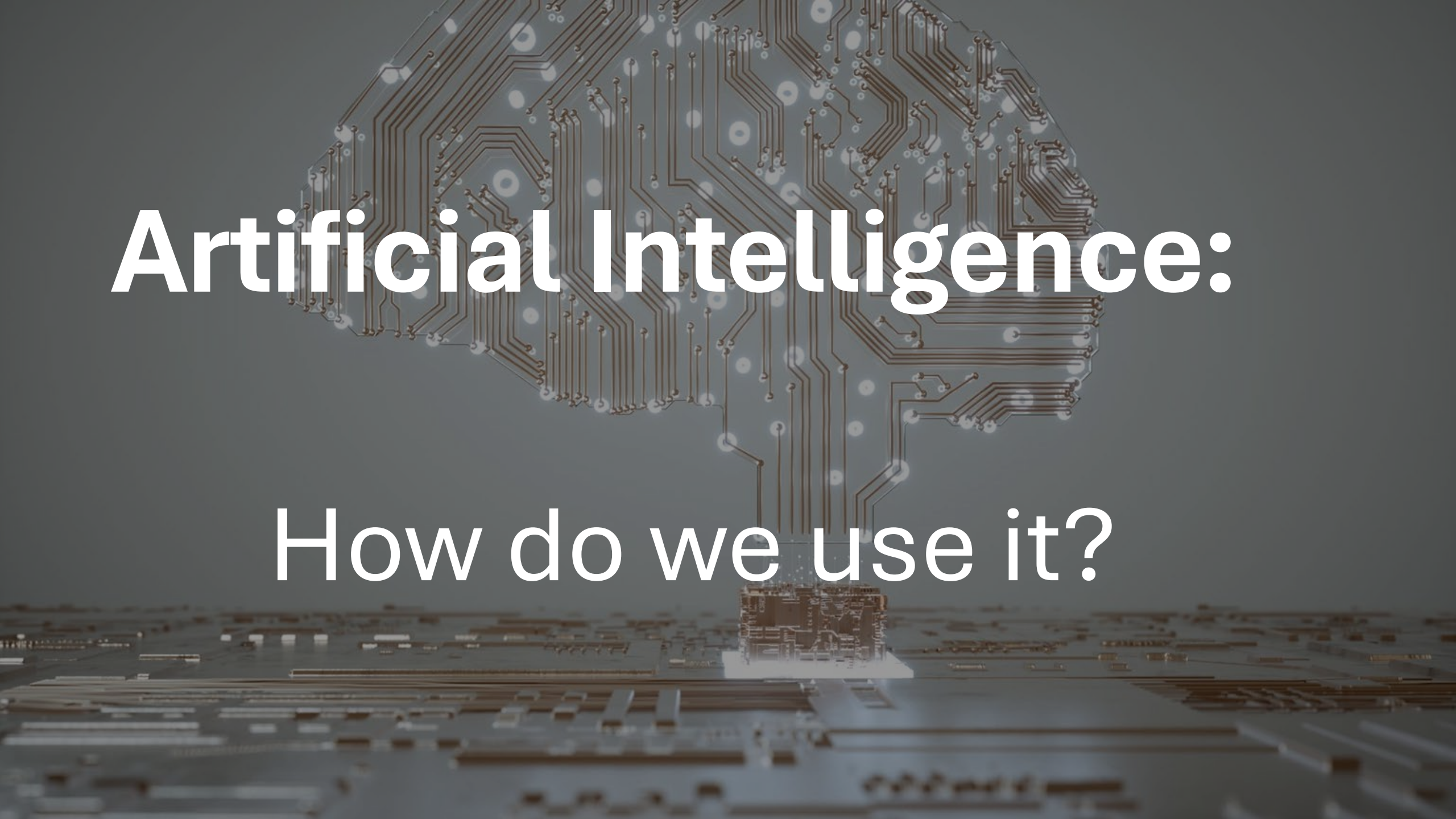
Long-Term Considerations

Ethical AI Development: Promoting diverse AI development teams.

Supreme Court Decisions: Navigating legal rulings on AI-related issues.



New Presidential Administration: A change to the current executive order



Artificial Intelligence:

How do we use it?

What it’s good at:

- Speech writing
- Idea generation
- Document review
- Communication Assistance
- Administrative Support
- Educational Content Creation
- Event Planning and Coordination
- Data Management
- Policy and Procedure Development
- Resource Allocation
- Professional Development

What it is NOT good at:

- Decision Making
- Handling Sensitive Information
- Providing Legal or Medical Advice
- Real-Time Crisis Management
- Personal Counseling or Therapy
- Physical Event Setup and Coordination
- Overriding Human Expertise
- Guaranteeing 100% Accuracy
- Creating Usable Images

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How can this help you?

- Automating scheduling and communication with students and parents
- AI helping with grant writing and funding proposals
- Using AI for data analysis to track student progress
- Press releases and letters of recommendation!

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How can this help you?

- How AI can assist in lesson planning, assessment, and student engagement
- Tools that help compose, arrange, and analyze music
- AI-powered accompaniment software for solo practice
- Adaptive learning systems that personalize instruction for students

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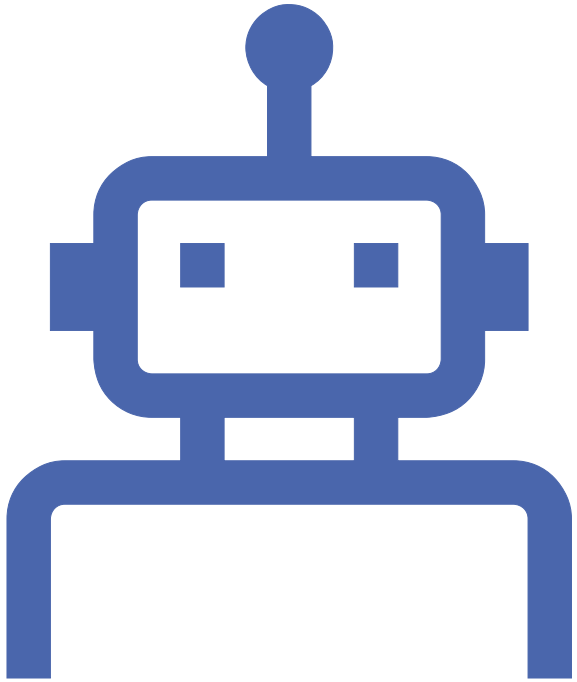

Let’s check it out!

- What can you do to save yourself time
- Do more than the basics
- Review and consent

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Thank you!

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