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Designers Lighting Forum

Lighting Design and AI – The Future is Here

Carla R. Bukalski and Lisa J. Reed

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Learning Objectives

1. Attendees will discover if and how AI can make lighting design more human-centric and personalized.

2. Can AI help us achieve work/life balance? Did the smartphone?

3. We are already using AI in business (Power Point's design assist, Grammarly, Midjourney) - Make AI just another tool in your toolbox.

4. Lighting designers have historically been reluctant to embrace new tools. Discover how to put AI to work for your business; it's not going away.

Definitions

- **AI** – Artificial Intelligence: development of computer systems/software that can perform tasks typically requiring human intelligence
  - Machine learning, natural language processing, etc.
  - Can typically do one thing really well
  - Google Assistant, Image recognition

- **AGI** – Artificial General Intelligence: Level of artificial intelligence with the ability to understand, learn, and apply knowledge across a wide range of tasks
  - Would exhibit consciousness, self-awareness
  - As of now, AGI does not exist

EXCITING!

TERRIFYING!

Definitions

- **Predictive Text** – technology that suggests words or phrases as a user types, designed to anticipate the next word or words

- **ChatGPT** – an artificial intelligence chatbot technology that can process our human language and generate a human-like response
  - Generative
  - Pretrained
  - Transformer

- **Hallucinations –** An AI's tendency to have "errors with confidence“

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If not implemented ethically, AI tools could infringe on privacy, potentially increasing stress and anxiety

"AI will be as good or as evil as human nature allows"
Sundar Pichai, Alphabet CEO

AIs will lull people into trusting their answers too much

"If you haven't had an existential crisis about this tool, then you haven't used it very much yet."
Ethan Mollick

"In 2023 we learned that a machine taught itself how to speak to humans like a peer, which is to say, with creativity, truth, error and lies,"
Scott Pelley, 60 Minutes

In a 2023 study, 3 out of 4 people worried AI would cause their own creative muscles to atrophy

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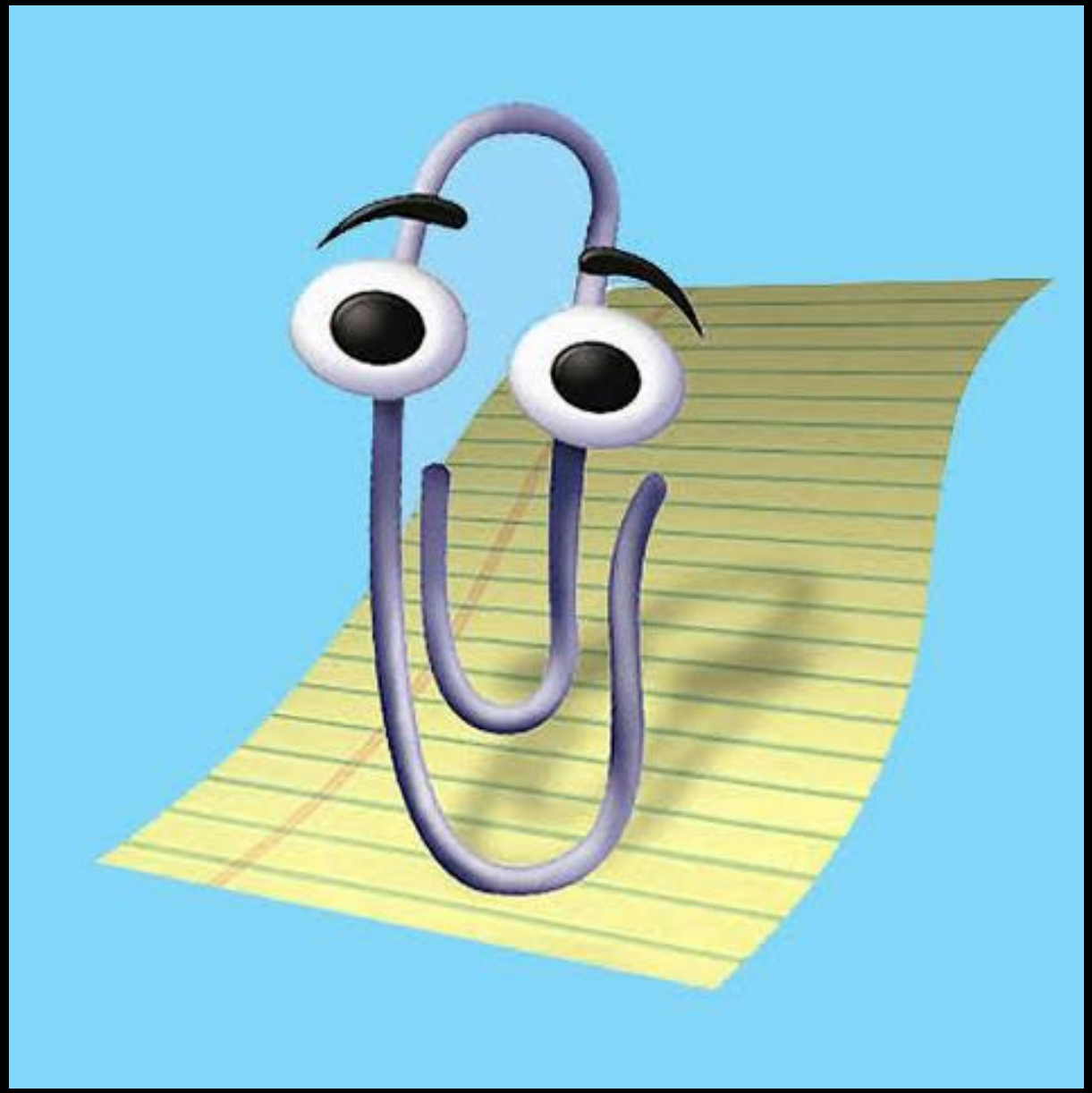
Can AI make lighting design more human-centric and personalized?

- An AI can learn your general patterns:
  - What time do you arrive/leave a space
  - What is your preferred CCT throughout the day
  - What is your preferred light level? If AI has access to your calendar, can learn scenes for video meetings, in person, etc.
  - Can link to your phone or smart watch to learn your patterns for any space
  - Make a smart home truly 'smart'



Can AI Improve Work-Life Balance?

- Positive:
  - Automation of mundane/repetitive tasks
  - Enhanced efficiency and accuracy
  - Improved time management
  - Virtual assistants / Chatbots

- Negative:
  - 24/7 connectivity/pressure to be always available
  - Privacy and ethical concerns
  - Job displacement for some roles

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Job Displacement

January 2019 predictions by Kai-Fu Lee: About 40% of current jobs will be replaceable by AI

- Anyone who is driving
- Chefs, waiters and other restaurant workers
- Store clerks

2023 Studies show near future replacement of copy writing, preparing legal briefs, drafting letters

Eventually:

- Writers
- Accountants
- Architects
- Software engineers

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Ethics

- Ethically sourced training data
- Need more diverse perspectives
- Systems need to align with human values
- ‘Bad Actors’ can still do bad things
  - Google Map Hack
- Regulations needed
- Moving toward AGI – Goal alignment will be critical

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Where are you already using AI?

- Predictive Text
- Personalized Marketing
- Voice Assistants – Siri, Alexa, Google Home, Cortana
- Navigation
- Smart Home Devices
- Grammarly / Grammarly Pro
- Power Point Designer AI and Rehearsing with Coach
- Photoshop
- Facebook
- LinkedIn

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Reluctant to use new tools? How to start using AI today.

- Getting Started – low stakes
- Then – take it up a notch
- Like to wordsmith? It's like "brainstorming with yourself!"
- Paid version can be worth it
- Other programs…

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How can we get the most from AI?

- Just do it
- Use good prompts
- Talk to it like it's a human
- Check your work
- "AI integrator"?
- Use Plug-ins
- Use AI for the right applications

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There are many ways of looking at the same thing…

- Remember our first AI-generated image?
  - “Create a futuristic image of someone sitting in a well-lit room, illustrating the concept of human-centric lighting”

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There are many ways of looking at the same thing…

- Remember our first AI-generated image?
  - "Create an ***expressionist*** style image of someone sitting in a well-lit room, illustrating the concept of human-centric lighting"

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There are many ways of looking at the same thing…

- Remember our first AI-generated image?
  - "Create a ***surreal*** style image of someone sitting in a well-lit room, illustrating the concept of human-centric lighting"

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There are many ways of looking at the same thing…

- Remember our first AI-generated image?
  - "Create a ***Pop Art*** style image of someone sitting in a well-lit room, illustrating the concept of human-centric lighting"

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There are many ways of looking at the same thing…

- Remember our first AI-generated image?
  - "Create a ***comic book*** style image of someone sitting in a well-lit room, illustrating the concept of human-centric lighting"

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There are many ways of looking at the same thing…

- Remember our first AI-generated image?
  - "Create a ***realistic*** style image of someone sitting in a well-lit room, illustrating the concept of human-centric lighting"

There are many ways of looking at the same thing…

- Remember our first AI-generated image?
  - "Create a ***painting*** style image of someone sitting in a well-lit room, illustrating the concept of human-centric lighting"

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I use it everyday – almost as a personal secretary.

It's like brainstorming with yourself!

We're still just scratching the surface…

"In just one year, AI is now embedded into nearly every application I use in my daily work."
Dan Kohnen

"I believe it will change the world more than anything in the history of mankind; more than electricity,"
Kai-Fu Lee, *the Oracle of AI*

Technology is integral to the design process – new tools help us.

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The Future is Here, Now What?

- Proceed with caution. Don't believe everything AI tells you!
- If you want to learn more…resources on the next slides

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The best AI chatbots

- The original: ChatGPT
- Longest conversation memory: Claude
- Online search, text, image generation: Microsoft Bing AI
- Integration with Google apps: Google Bard
- Open license: Meta Llama 2
- Multiple AI models: Poe
- For internet deep dives: Perplexity
- Safety off: Grok
- Open source: HuggingChat
- For building your own chatbot: Zapier Chatbots
- For content writing: Jasper Chat, Chat by Copy.ai, Chatsonic, ZenoChat
- For sales and marketing: ChatSpot
- For messaging: Personal AI

- Copilot integrated into Windows 11 (free!)
- Notetaking: Copilot for OneNote, fireflies.ai, and others
- Crystalknows – DISC Personality mapping for LinkedIn

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TERRIFYING!

- The potential that AI can join existing web data mining counterparts to mislead and misinform the next generation
- AI speaks with such authority that we are believe it is always accurate
- AI can be used for malevolent purposes by those that want to do harm
- Living a complete 'life of luxury' - will humans lose all meaning and purpose?

- **Life 3.0**, Max Tegmark
- Face ++ (facial recognition)

- Sydney (Bing/Co-pilot chat alter-ego)
- Consumer privacy
- Biased programming
- Unclear legal regulation

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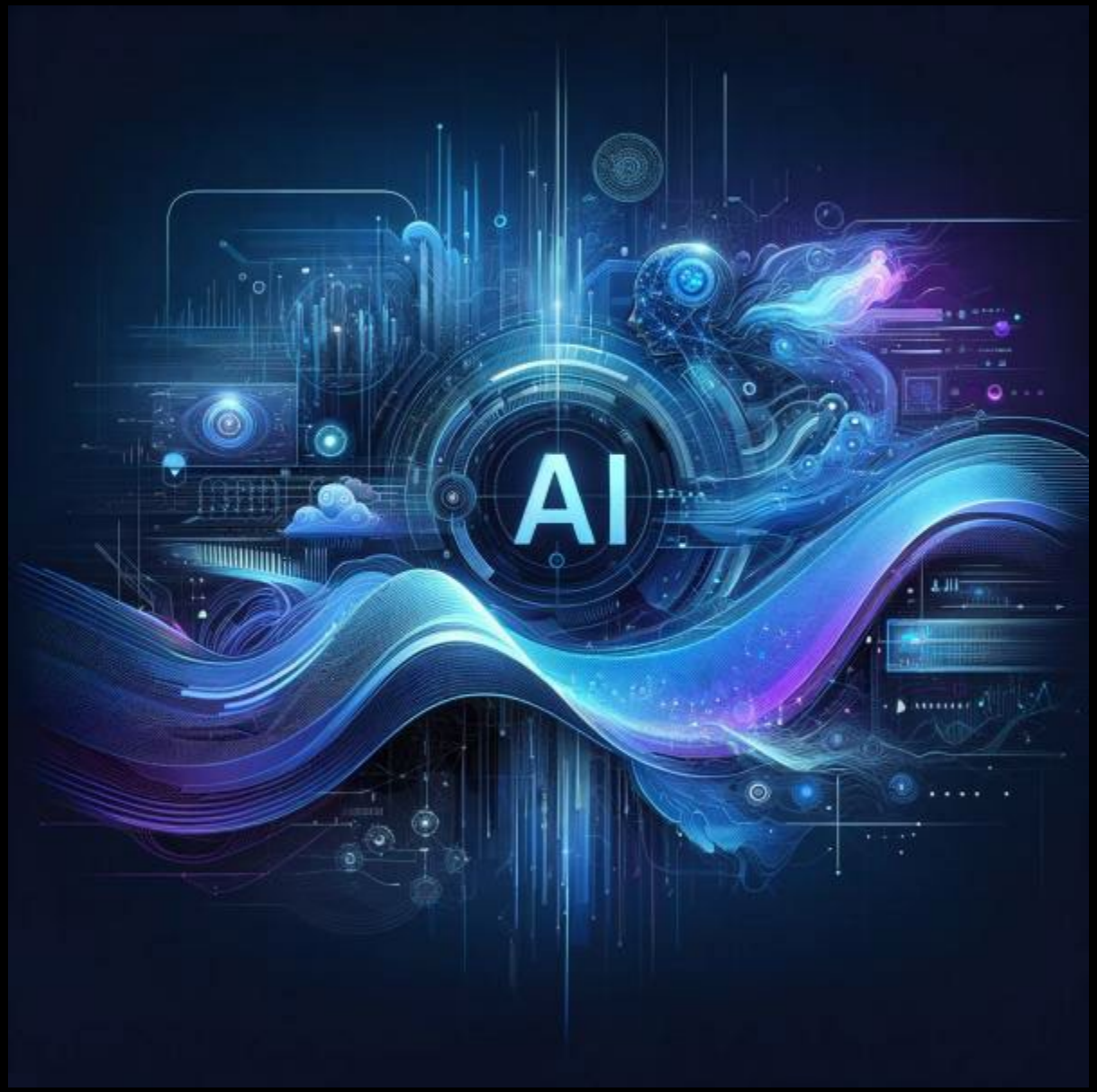

Q and A

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This concludes The American Institute of Architects Continuing Education Systems Course

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