

Imagining a More Artificially Intelligent Future

Al offers multiple solutions to save time and improve processes for stage and production managers

BY TOM ZHANG

uring the 2023 USITT Conference & Stage Expo, four sessions discussed using AI image generators to inspire or generate content for design projects. One conversation was especially fascinating:

"Do you think AI will eventually replace designers?"

"No, but I think designers who use AI will eventually replace those who don't." It's a wise answer. As generative AI tools such as ChatGPT becoming more and more powerful, almost every industry is exploring the possibility of incorporating AI tools into their daily workflow to boost productivity. According to a June 2023 study by OpenAI and the University of Pennsylvania, generative AI will impact 10% of the tasks carried out daily by 80% of all workers (Orru 2023). As managers in the theatre industry, we are no exception. We should embrace a future in which AI tools assist us in carrying out our daily tasks more efficiently, so that we can invest more time and attention in meaningful, human-centered works.

If you're a stage manager familiar with Microsoft Office software and other tools for paperwork, it's likely that you've already been using many AI functions, including the error-detection function of word processing apps, the PowerPoint designer function, Outlook's automatic sentence-complete function, etc.

However, tools that emerged in recent years can go far beyond that to produce high-quality content, including text, codes, image, video, and audio. The core mechanism of text-based generative AI, like ChatGPT (https://openai.com/ chatgpt) is Large Language Model that repeatedly predicts the next word based on the training data given by researchers; the more data it gets, the better the model becomes (Ng 2023). ChatGPT 4 by OpenAI, for example, is trained using a combination of public data (such as Internet data) and data licensed by thirdparty companies (OpenAI 2023).

Besides the simple functions mentioned before, such tools can now write a whole script (see Marks 2023), create a slide show, or create theatrical designs (see Foresee 2023) in seconds. They can understand natural language and its context, so that you can chat with the tool back-and-forth. What's more, they can learn from newly provided materials, enabling you to train them into AI agents who can carry out specific tasks for you (Hiter 2023), such as the Custom GPTs function of ChatGPT 4.

Using ChatGPT 4, I tested generative AI's ability to complete some stage/ production management-related tasks. Even though it also has powerful coding capability that can significantly improve many stage/production managementrelated software, my testing is focused solely on the potential of its everyday, accessible use for individual stage and production managers.

Based on the testing results, I rated each type of application in three dimensions, using a five-star system.

Ease of use: Is it easy to learn and convenient to use?

Efficiency: Does it help save time and efficiently complete our work?

Accuracy: Is the output stably accurate most of the time?

Although the results show some limitations of this tool, considering the jaw-dropping speed of the development of AI, there's a promising prospect that it will become a powerful tool for our field in the near future.

Reading

Generative AI tools are excellent at reading long and complex texts, then generating summary, critique, or certain answers within a few seconds. This can be very helpful when processing complicated documents.

Unraveling Redundant Communication Ease of Use: ★★★★

Efficiency:	****
Accuracy:	****

As stage/production managers, we often keep track of multiple channels of communication to solve problems. Ever found yourself trapped in a long email chain/chat history and had to understand the situation? What's worse, if there are multiple trains of communication about the same topic happening simultaneously, it makes it even more difficult to unravel.

Using generative AI, you can copy and paste all the emails/chats/notes into ChatGPT, and ask it to "summarize the final decisions, questions, and action items." It will then generate a concise and clear report, showing you the important information. The only issue is that sometimes when you import too much information, you may encounter an inaccurate result.

Similarly, you can use it for scheduling meetings: Just ask everyone to email their available time or conflicts, then dump all the information into ChatGPT, and let it find out the best time for a meeting (see Image 2).

Interpreting Union Rulebooks & Contracts

Ease of Use:	***
Efficiency:	*****
Accuracy:	$\star\star\star$

No matter if you're an Equity stage manager or a production manager who deals with various union contracts, you need a thorough understanding of rulebooks and contracts. Sometimes, the process of combing through these long documents and finding answers to specific cases can be difficult and time-consuming.

With ChatGPT 4, you can import the whole rulebook and interact with AI to find out answers. For my own testing, I applied some prompting techniques to make the answer more stable and accurate. Because these prompting skills require learning and practice, this may challenge new users a bit. Once built into a Custom GPT (https://openai.com/ blog/introducing-gpts—a small customized ChatGPT that allows you to store prompts and documents), along with

GPT-4

Input

Andrew is free from 11 am to 3 pm, Joanne is free from noon to 2 pm and then 3:30 pm to 5 pm. Hannah is available at noon for half an hour, and then 4 pm to 6 pm. What are some options for start times for a 30 minute meeting for Andrew, Hannah, and Joanne?

Output

Andrew: 11 am - 3 pm Joanne: 12 pm - 2 pm, 3:30 pm - 5 pm Hannah: 12 pm - 12:30 pm, 4 pm - 6 pm

Common availability for a 30-minute meeting: 12 pm - 12:30 pm

Image 2: Example on ChatGPT 4's official website

Where ChatGPT Excels

- Explaining concepts: ChatGPT does a great job in explaining concepts in plain language, unlike formal, esoteric language used in the rulebooks. What's more, you can even use prompts like "Use easy/plain/concise/primary-school language to explain..." to make the concepts more understandable. In the example shown below, you can see two levels of explanation: professional level, and "middle schooler" level, which can accommodate readers from different backgrounds.
- Analyzing specific scenarios: In a complex scenario, it might be difficult to decide which rules apply. By describing the full situation to Chat-

GPT, you can get an initial analysis that points you to certain sections and provisions, and a judgement by itself. Below is a scenario scheduling rehearsal and publicity event in a one-performance day. The conclusion drawn by ChatGPT is not specific enough for me to complete the scheduling, but the restrictions it brings up are useful, and the provisions it points to are accurate too. By looking into them, I was able to solve this puzzle more efficiently.

Where ChatGTP Fails

 Limited reasoning ability: Sometimes ChatGPT is not good at synthesizing remote concepts to draw a correct conclusion. When it comes to a massive, complicated document like the AEA rulebook, it may make reasoning mistakes ("hallucination," in AI terms) that costs you extra time to proofread and correct. How the prompt is phrased can also affect the stability of its answer; you might find each time you ask it to regenerate the answer, the answer changes slightly. In the earlier example, ChatGPT has a reasoning mistake: If the show runs 3.5 hours, based on Rule 51 c (3), the rehearsal shall not exceed 4.5 hours. ChatGPT couldn't take half-hour into account, and therefore didn't understand that rule correctly.

• Inability to interpret tables: Currently, all the generative AI tools are better at understanding unstruc-

T You what

what is banking in the context of non-professionals in this rulebook? $\langle 2/2 \rangle$

🚳 ChatGPT

Provision Number: Rule 39(G)(5) Page Number: 59

Reasoning: Banking in the context of non-professionals within the rulebook primarily involves managing the engagement of non-professional actors based on the number of professional contracts in effect for a particular production. The process allows a theatre to "bank" a nonprofessional for future use within the same season, under specific conditions. The number of nonprofessionals a theatre can bank is directly related to the number of professional (Actors' Equity) contracts they have. This system is designed to maintain a balance between professional and non-professional participants in productions, ensuring that theaters meet their professional obligations while also allowing some flexibility in the use of non-professional talent. Conclusion: Banking allows theaters to manage the participation of non-professionals in productions, offering flexibility while adhering to professional standards. Confidence Level: High, based on the information directly extracted from the rulebook.

T You

1. explain it to middle schoolers who don't know much about the atre $\ensuremath{\mathcal{A}}$

SchatGPT

Imagine you're playing a video game where you can earn special coins by completing levels, and you can use those coins to unlock new characters or levels later in the game. In the world of theatre, according to this rulebook, "banking" is a bit like saving up those special coins.

When a theatre puts on a show, they often hire professional actors who are part of a special club called Actors' Equity. Sometimes, they also want to include actors who aren't part of this club, known as non-professionals. The rulebook has a special system, kind of like a game, where for every professional actor they hire, the theatre gets a "coin" they can save. They can use these "coins" to include non-professional actors in other shows later in the season.

So, banking here means the theatre is saving up opportunities (like those special coins) to work with non-professional actors, based on how many professional actors they've hired. It's a way to balance having professionals and non-professionals in their shows throughout the season. You are in previews for a show that currently runs 3 1/2 hours. Curtain is at 7:00pm. The director would like a rehearsal that day, but the theatre is hosting a huge charity event at 3:00pm and has requested the actors' presence. The director wants to rehearse for 5 hours. Tell me all the limitations I need to know.

ChatGPT

Provision Numbers: Rule 51(C)(3), Rule 51(E)(4)-(5)
Page Numbers: 70, 74-75

Reasoning: For a show running 3 1/2 hours with a curtain time at 7:00 PM, on a day with a performance, the maximum rehearsal duration cannot exceed five consecutive hours as per Rule 51(C)(3). Given the rehearsal and performance constraints, including the charity event at 3:00 PM, scheduling a 5-hour rehearsal block requires careful planning to not overlap with the event, adhere to the maximum rehearsal duration, and ensure compliance with mandatory rest periods. The rule mandates no less than a 12-hour rest period between the end of employment on one day and the beginning of employment the next day, with specific provisions for rest periods on days with performances (Rule 51(E)(4)-(5)). Considering the charity event, the timing of the rehearsal, the length of the performance, and required rest periods, it's challenging to accommodate a 5-hour rehearsal without violating these rules.

Conclusion: A 5-hour rehearsal on a performance day for a show running 3 1/2 hours, with a charity event at 3:00 PM, must be carefully scheduled to comply with AEA-LORT rules regarding maximum rehearsal durations, performance day limitations, and required rest periods. It appears challenging to fit the requested rehearsal without adjusting the existing schedule or reducing rehearsal time to comply with the rulebook's constraints. Confidence Level: Hioh

what is the minimum weekly salary for stage manager in LORT B, non-rep musicals?

SchatGPT

Provision Numbers: Rule 55

Page Numbers: 84

Reasoning: The rulebook specifies the minimum salaries for Assistant Stage Managers in Non-Repertory, which includes the "B" category for different years leading up to and including the period up to 2/13/22. While the provision specifically mentions Assistant Stage Managers, it provides insight into the structure of minimum salaries within the LORT agreement, including for Stage Managers by category and timeline.

Conclusion: The minimum weekly salary for a Stage Manager in a LORT B, non-rep musical up to 2/13/22 is \$1,461.

Confidence Level: High

tured data, which is information written in paragraphs, than interpreting structured, tabular data (Zewe 2023). Therefore, when I tested it with questions like "minimum weekly salary for actors in LORT B companies" (see example on previous page), it often makes mistakes, because information like minimum salary is organized in tabular format in all AEA rulebooks. Apparently, pieces of information organized in tables in a PDF can confuse ChatGPT and it can't associate information across columns and rows.

The simplest workaround for this issue is manually "translating" these tables into text in paragraphs ("the minimum salary for ASM in non-rep musical is xxx as of xx date, xxx as of xx date, etc."), then importing into ChatGPT. This works fine for a small amount of data but will be challenging when there's too much information.

Note: for this part of testing, some questions are inspired by quiz questions of the THEA408 AEA Stage Management class at University of Illinois Urbana-Champaign, taught by Teaching Associate Professor Cindy Kocher, the instructor of the class and my advisor in grad school. I want to extend a huge Thank You to Cindy!

Category	Details
Plot Summary	"Take Flight" narrates the intertwined tales of aviation pioneers: the Wright Brothers' perseverance in inventing the airplane, Charles Lindbergh's solo transatlantic flight, and Amelia Earhart's groundbreaking achievements and aspirations. Through their stories, the musical explores the themes of innovation, resilience, and the quest for the unknown, showcasing how these aviators overcame doubts and personal hurdles to leave a lasting legacy in the history of flight.
Casting Needs	Multiple actors for roles including the Wright Brothers, Charles Lindbergh, Amelia Earhart, Ray Page, bankers, and ensemble roles for historical figures and public. Requires versatility for actors to play multiple roles, including historical figures with distinct accents or dialects.
List of Locations	Dayton Ohio, Kitty Hawk, Lincoln Nebraska, Boston, New York, San Diego, across the Atlantic, Nova Scotia, Wales.
Scenic Design Challenges	Transformative sets for diverse locations including workshops, airfields, and interiors across different eras. Dynamic lighting and sound to capture the essence of early 20th-century settings and the thrill of aviation. Incorporation of flight simulations and environmental effects such as wind.
Costume Design Challenges	Authentic period costumes for early 20th-century settings, reflecting historical accuracy for each character, including aviators' gear and everyday attire. Versatility in costumes to allow quick changes for actors in multiple roles. Special attention to iconic items like Lindbergh's flight suit and Earhart's aviator attire.

Image 3: ChatGPT's script analysis for Take Flight. | Image courtesy of Tom Zhang.

updated rulebook—it will be much more accessible and easier to use.

Proofreading Complex Schedules Ease of Use: ★ Efficiency: ★ Accuracy: ★

Another complex reading task that stage/ production managers often face is scheduling. When you have a big company with several shows going on simultaneously, avoiding double-booking becomes tricky. Even proofreading a schedule for such scenario can be difficult. While some professional software tools include conflict-checking functions, but they are often expensive and require complex training. What if you can import a full schedule into ChatGPT and let it do the proofreading for you?

In my testing, ChatGPT performed poorly when processing a normal daily schedule. The reason is the same: It can't read paperwork structured in a table, which is the most common format for schedules. Therefore, all other common paperwork such as Run Sheet, Props List, and Costume Change Sheet are all unsolvable puzzles for generative AI as of right now.

An advanced workaround for

complicated table scenarios is using PDF-parsing tools (such as Tabula) to transform tables in PDF into tabular data (csv or JSON), then interacting with it using AI models designed for tabular data, such as the TAPAS model (Herzig et al. 2020). On the other hand, we are seeing spreadsheet apps all working to incorporate generative AI to make it easier for users to interact with tabular data in natural language. Therefore, we can anticipate that in a very near future, generative AI can become a powerful tool to help interact with our paperwork and calendars.

Script Analysis

Ease of Use:	$\star \star \star$
Efficiency:	****
Accuracy:	***

Although stage/production managers must often read a script several times to retrieve necessary production information and gain artistic understanding, it doesn't hurt to have AI retrieve information for cross-checking and efficiency. What's more, sometimes production managers need to review multiple scripts in a short period of time, and AI can help find out essential information in those scenarios.

Testing results show that when given

a full script, ChatGPT works better in quickly answering big picture questions, but doesn't do well in finding details accurately. For example, it can summarize the plot, theme, casting needs, number of locations, design challenges, and specialists needed in a few seconds, which is very helpful for production managers in the initial process of selecting plays, especially new plays that haven't been produced. On the previous page, Image 3, is an example of the script analysis for *Take Flight*, generated by ChatGPT with a given script.

When we ask ChatGPT to "provide a detailed props list that includes page number, scene number, prop name, character name, etc.," we begin to see a lot of errors, like wrong numbers, missing props, misidentification (treating costume pieces as props), etc. The same is true for character/scene breakdown: ChatGPT currently can't achieve the level of detail that stage managers need.

Like interacting with the AEA Rulebook, script analysis also requires detailed and well-crafted prompts to function as you wish. There's also those esoteric concepts necessary for script analysis, such as "stage violence" and "stage intimacy" that you want it to learn and remember. Therefore, building a Custom GPT that stores all this necessary information can be useful.

Transcribing Blocking Notes

Ease of Use:	$\star \star \star$
Efficiency:	****
Accuracy:	$\star\star\star\star$

Stage managers are professionally required to write blocking notes that are clear enough that any trained people can understand them for both emergency and archival purposes.

ChatGPT is an excellent tool for transcribing texts from images of esoteric languages; it has even been used in archaeology to decipher ancient manuscripts (Nelson 2023). With some basic training, it has the potential to become a powerful tool for accurately transcribing scanned blocking pages into text format. The question for us is: Is it easy to train it to learn new, personalized symbols?

In my testing, ChatGPT 4 performs well when transcribing normally written shorthanded words and simple symbols like arrows, but becomes unstable

You DX PR, UCH Gnt DL,×UL,↑T 5 cs. 1 Ch

😚 SM Blocking Transcriber

1: Mr. Peachum crosses to Downstage Right, sits on Chair.

- 3: Polly enters Downstage Left, crosses to Upstage Left, stands up.
- 5: Mr. Peachum crosses to Polly.
- 7: Mrs. Peachum crosses to Center Stage, stands up Chair.
- 9: Polly gives to Mrs. Peachum.

Image 4: While ChatGPT successfully translated some notations, it struggled with individualized notations such as the symbols for "table" and "turn to" in notes 3 and 9. | Image courtesy of Tom Zhang.

T You

first hour Staging A1S1 with Mack and Polly, next half hour staying A1S2, next hour Staging A2S1 with Mack, Polly, Mr P, and Mrs P

SM Scheduling Assistant

ТІМЕ	EVENT	LOCATION	CALLED
7:00pm~8:00pm	Staging Rehearsal A1S1	Casa Bacardi	Jack B., Mary A.
8:00pm~8:30pm	Staging Rehearsal A1S2	Casa Bacardi	David C., Ellis D., Ensemble, Jack B., Jason D., Logan B., Mary A., Superman E., Will S.
8:30pm~9:30pm	Staging Rehearsal A2S1	Casa Bacardi	David C., Ellis D., Jack B., Mary A.

Image 5: A call schedule, created using a Custom GPT described in the *Generating Simple Schedules* section. | Image courtesy of Tom Zhang.



Image 6: Scene data that was fed into the Custom GPT to produce the call schedule in Image 5. | Image courtesy of Tom Zhang.

when it comes to personal, invented notations, even though I gave it a detailed key document. In the example shown in Image 4, it transcribed most of the notes correctly, except for the symbol I use for "table" in note #3, and the symbol I use for "turn to" in note #9.

Making it recognize these symbols more stably requires more advanced AI techniques, such as Fine-tuning and Pre-training, which allow you to refine the AI model using your own dataset that aligns with your specific tasks (Junco 2023). Currently, these techniques still create a tech-barrier and make it less accessible to individuals with no coding skills. However, it's likely that more convenient, simpler models will emerge in the near future that can be trained to learn these personal blocking notations easily and become a powerful personal assistant for transcribing handwriting into digitized data.

Writing

As stage/production managers, we routinely deal with paperwork and use various written communication tools. What if we take advantage of AI's ability to generate high-quality texts to help make our writing better and more efficient?

Transforming Textual Format, Sorting, Checking, and Fixing Simple Errors

Ease of Use:	*****
Efficiency:	*****
Accuracy:	*****

Sometimes our work requires repetitive, machine-like tasks to complete paperwork, such as sorting names by last names, changing names to the format of "first name initial and full last name," checking and fixing typos in names, etc. These tasks are tedious, time-consuming, and error-inducing when performed by humans.

If you know Excel formulas or coding well, you can use them to automate the workflow; but if not, these simple tasks are often annoying. With ChatGPT, you can simply copy and paste the text and tell ChatGPT what you need, and it will give you a perfect result within a second.

Generating Sim	ple Schedules
Ease of Use:	****
Efficiency:	*****
Accuracy:	$\star\star\star\star$

With the table generation and Custom GPTs (OpenAI 2023) function, it's possible to ask ChatGPT 4 to assist with generating simple schedules from a few sentences.

In the example shown in Image 5, I only gave it a three-sentence prompt, and the result is a schedule in table format, with the correct actors called, and their names formatted in the way I wanted sorted by first names, as well as the location and call times all in the format I wanted. What's more, if there's any double-booking, it will remind me of it.

To achieve this, I first started a Custom GPT called "SM Scheduling Assistant." Then I imported the cast list, character scene breakdown, a series of rules about formatting, default location and start time, double-booking reminder, etc. The performance of this tool is, as shown in the picture, quite impressive. It's intelligent enough that even when I gave shorthanded names (Mr P, Mrs P) and misspelled words (staying A1S2), it can still give me correct answers.

One thing to note is that to accommodate ChatGPT's inability to understand tabular data, the cast list and character scene breakdown I imported were all written in paragraphs, instead of the normal stage management paperwork we use. For the example in Image 5, the character/scene breakdown inputs I made for ChatGPT looks like the paragraphs in Image 6.

Meeting Notes a	and Reports
Ease of Use:	*****
Efficiency:	****
Accuracy:	****

Many apps available today can transcribe everything people say during a meeting and sort it into a meeting notes document. The transcript function of many online meeting apps is also powerful enough that you can have a very detailed and accurate transcript immediately after the meeting. Using ChatGPT 4, I imported a meeting transcript from Zoom, and asked it to generate meeting minutes and sort notes by departments. I also specifically asked it to list action items separately. The result is quite satisfying: ChatGPT can generate a well-written, comprehensive, and accurate meeting minute (Microsoft 2023), tailored to the specificity that you asked.

As human stage/production managers, we are often better at seeing the connections between pieces of information and sorting out the important ones. For example, based on our knowledge of technical theatre, when we learned the scene designer wants to change their color palette, we immediately know we need to inform Lighting, Media, etc.

ChatGPT is unable to see these more sophisticated connections since it lacks training and knowledge in these specialized fields. Like the blocking notes transcript function mentioned before, this is where fine-tuning and pretraining can help improve the AI model for your specific purpose. With enough training, it's very possible an AI model can learn to recognize these internal connections and write better notes. In fact, with enough training, I believe generative AI can become better than humans at recognizing these logical patterns, and it can even remind us when we neglect any cross-departmental references.

Writing Emails	Company Documents
Ease of Use:	****
Efficiency:	$\star \star \star \star \star$
Accuracy:	****

It seems counter-intuitive to ask for help from AI for something as simple as writing emails. But in fact, many email apps have already incorporated AI to suggest instant quick responses, based on the email you're responding to. When it comes to writing more complicated content, ChatGPT is also an excellent assistant as a proofreader, a reasoning engine, and a thinking partner. Here are some good examples:

- "Proofread this company welcome email, point out any grammar, punctuation, and spelling mistakes and suggest modifications." This is a very basic but effective use of ChatGPT. It can fix basic writing errors very fast and give accurate feedback.
- "As a new actor in the company, read this company welcome email and point out any potential questions, confusion, or concerns." ChatGPT is good at assuming a role and offering critiques in that role. This can be very helpful when you're writing a long email or document and need a second pair of eyes to proofread your content. After all, there's no one as meticulous and patient as an AI assistant.
- "Make the tone and style of this company welcome email more professional/warm/welcoming/concise." Based on the massive amount of training data it has, ChatGPT can effectively transform the style of your text. If you feel unsure about your wording when writing a document or responding to an email, AI might give you some hints. You can try multiple different prompts, and let it generate several versions, until the result satisfies your needs.

What's more, if you worry that the content might not sound like yourself after modifying the style, no worries, ChatGPT can even learn your writing style! You just need to import some of your writing samples, then ChatGPT will simulate your style and generate content based on that style.

Chatting

As stage/production managers, we're the hub of information in a production team, and often the go-to person when people have all sorts of questions. We answer those questions by using our comprehensive understanding of technical theatre and our institutional knowledge of the people, the show, and the theatre. If we can't answer those questions, we point people to the correct personnel in charge of those fields. What if we train an AI chatbot to answer the questions as well as we do?

Knowledge Bas	e Chatbot
Ease of Use:	****
Efficiency:	****
Accuracy:	****

People usually hate dealing with customer service chatbots, because they're inflexible, unable to understand full context, and react to new situations slowly. But if it has all the institutional and technical information, and can answer questions fast and flexibly, just imagine how much time and work it can save you.

With ChatGPT's Custom GPTs and other similar products, you can easily build a knowledge base for your organization. You just need to import all your company rulebooks, guidelines, etc., into your own GPT, write some prompts to customize its conversation style, then it becomes an intelligent agent that can answer questions like a human. The more knowledge you feed it, the more powerful it becomes. In a complex, huge organization, this is a strength that human workers need years of experience and learning to obtain.

Per tests mentioned before, ChatGPT 4 has many limitations when performing certain tasks and is not reliable enough to function independently. There are still technical shortcomings making it incompatible with much of the paperwork stage/production managers are familiar with. However, there are also several aspects in which ChatGPT can function well and shows promising capabilities.

As a stage manager, I have no doubt there are many human aspects of our profession that can never be replaced by AI. But just as the personal computer and Google changed our life and work drastically in the last few decades, I also have no doubt that generative AI will revolutionize how we work soon. If we ignore or evade the AI revolution, it could become a challenging enemy who may replace us; but if we learn, embrace, and make use of it, it will become a powerful tool to improve our work and life.

Author's note: When conducting research for this article, I was constantly amazed with the speed of update and development of AI. Almost every week, more advanced models are released by tech companies, such as Google, OpenAI, Microsoft, and DeepLearning. For example, GPT-4o, the new model demonstrated by OpenAI in May 2024, can already visually perceive its environment accurately and talk with a human in an amazingly natural and fluent tone, which further expands its potential in its applications. By the time this article is published, some limitations might have already become outdated for some accessible tools. In this article, I did not touch on the potential of a more powerful type of AI: an AI agent that can perform all the intellectual tasks a human being can perform, which is called Artificial General Intelligence, or AGI (IBM n.d.: https://www.ibm.com/topics/ strong-ai). When combined with sensory perception, it can see, listen, and feel; with fine motor skills, it can manipulate objects, just as human hands. This is the most cutting-edge research in the AI field, and scientists have been arguing how likely AGI is going to happen in the imminent future. One thing I'm sure is, when tools like that become accessible to the public, it will revolutionize much more tasks of our profession: we might easily train a bot that can call a show, take blockings, or schedule a whole season of shows.



Tom Zhang is a stage manager and educator originally from China. He will soon join University of Florida School of Theatre and

Dance as a lecturer in stage management. His favorite stage management credits include: Take Flight (UM Department of Theatre Arts), Fiddler on the Roof (Seagle Festival), Something Rotten (Post Playhouse), and Turn of the Screw (Lyric Theatre at Illinois). His assistant stage management credits include: Urinetown (Illinois Theatre), and The Adventures of Little Sharp-Ears (Lyric Theatre at Illinois). His current research interest is the application of database and generative AI in stage management and education practices. He received his MFA in stage management from the University of Illinois Urbana-Champaign.

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