

The role of AI in content creation process

December 1, 2022



AI has been in the news a lot this year

 The New York Times

A.I. Is Not Sentient. Why Do People Say It Is?

As the sun set over Maury Island, just south of Seattle, Ben Goertzel and his jazz fusion band had one of those moments that all bands hope...

1 hour ago

 TheNextWeb

Stanford AI experts call BS on claims that Google's LaMDA is sentient

Scientists fears that hype about LaMDA's supposed sentence is distracting us from more pressing concerns about AI.

2 days ago

 The Register

Claims of AI sentience branded 'pure clickbait'



WSJ

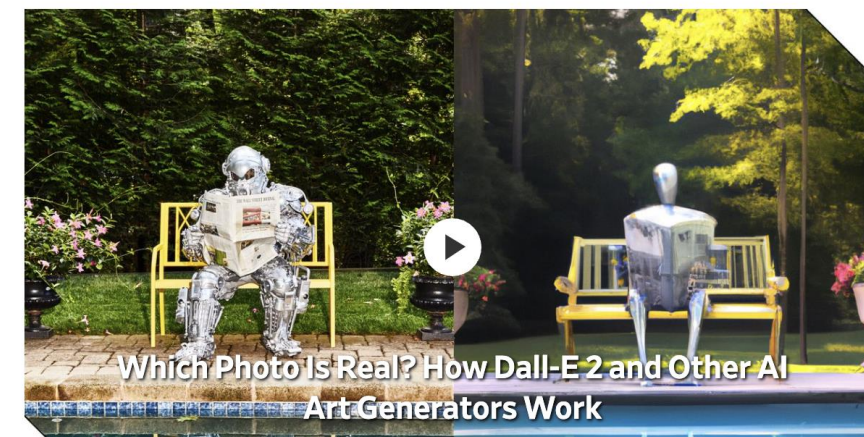
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SIGN IN

KEYWORDS: CHRISTOPHER MIMS

Can You Tell Whether This Headline Was Written by a Robot?

Not this time, but AI is churning out articles, illustrations, fake product reviews and even videos



Practical use of AI in content creation

What is AI and NLP?

Use cases

Value and efficiencies

Opportunities and issues

Types of vendors

A case study: AI for Broadway

At the intersection of human creativity, data, and AI

Bob Hofmann



Marina Petrova



Bruce Amick



What is AI?

In the simplest terms, AI refers to systems or machines that mimic human intelligence to perform tasks and can iteratively improve themselves based on the information they collect.

Oracle

What is NLP?

Natural language processing (NLP) refers to the branch of computer science—and more specifically, the branch of artificial intelligence or AI—concerned with giving computers the ability to understand text and spoken words in much the same way human beings can.

IBM

Large Language Models (LLM)

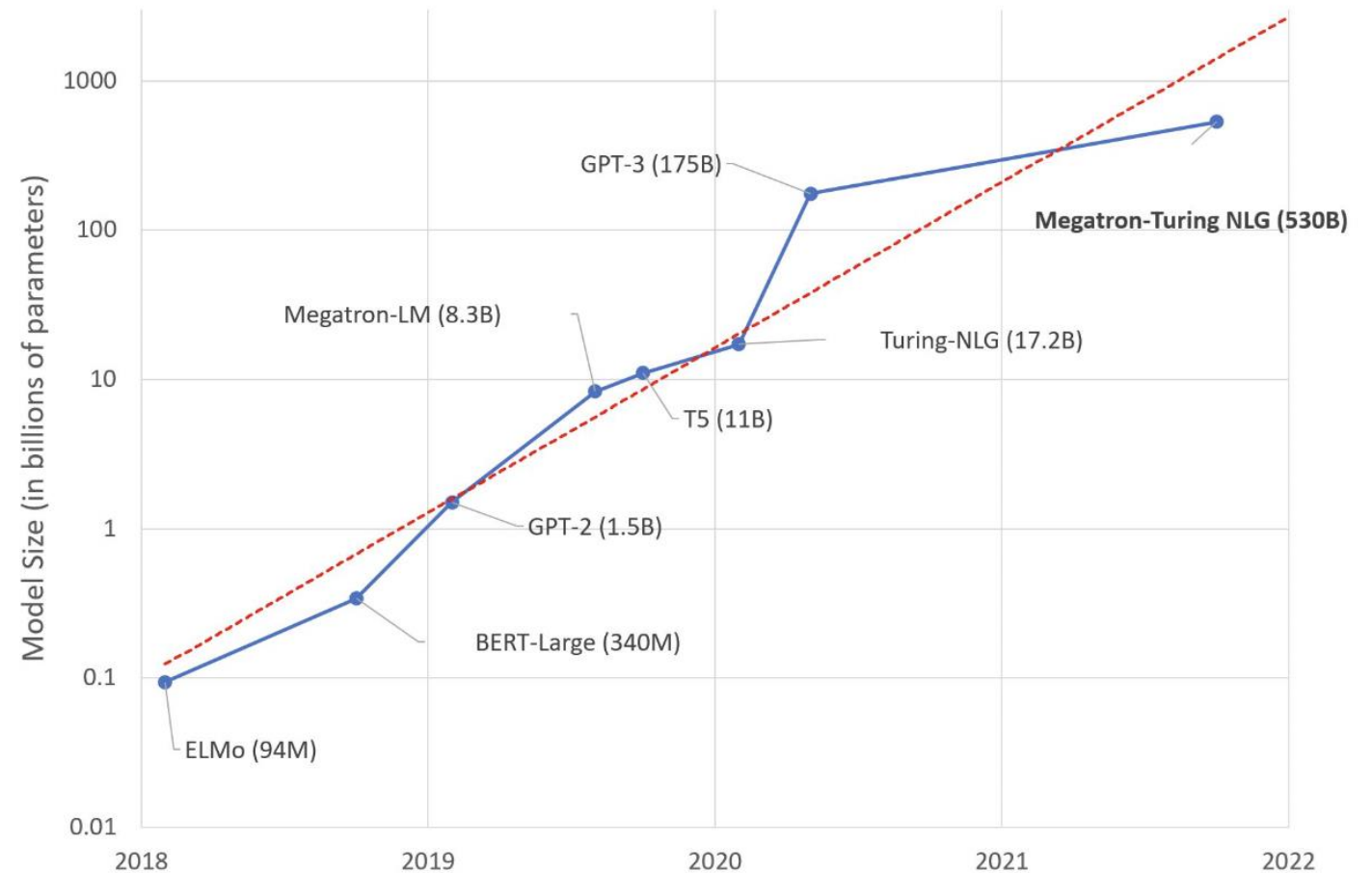
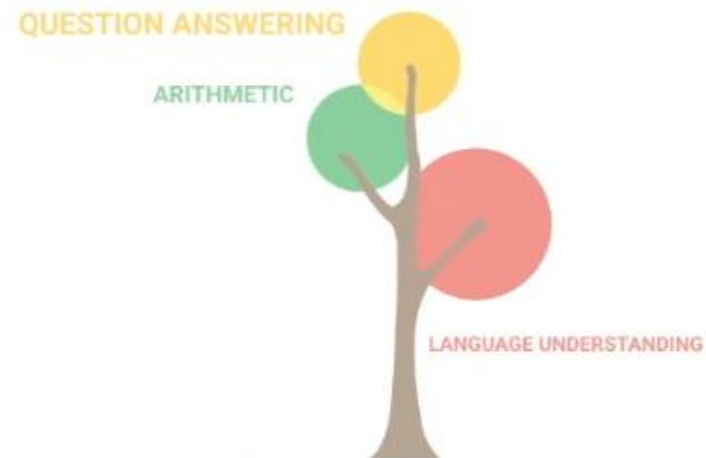


Figure 1. Trend of sizes of state-of-the-art NLP models over time



8 billion parameters

As the scale of the model increases, the performance improves across tasks while also unlocking new capabilities.

**A super
capable
“employee”**

- ✓ Knows everything you want it to know
- ✓ Works super fast
- ✓ A multitasker
- ✓ A polymath
- ✓ Delivers at the quality level set by you

But a robot

Augmenting Human Creativity

Empowering humans to create more quality content, faster, and at a lower cost.



GUTENBERG'S PRINTING PRESS,
1441.
THE TOP CROSS BEAM IN WHICH THE SCREW WORKED.
DISCOVERED IN THE HOUSE IN WHICH GUTENBERG LIVED,
IN MAYENCE, F. FRY, 1877.

Efficiencies, Scale, and Savings

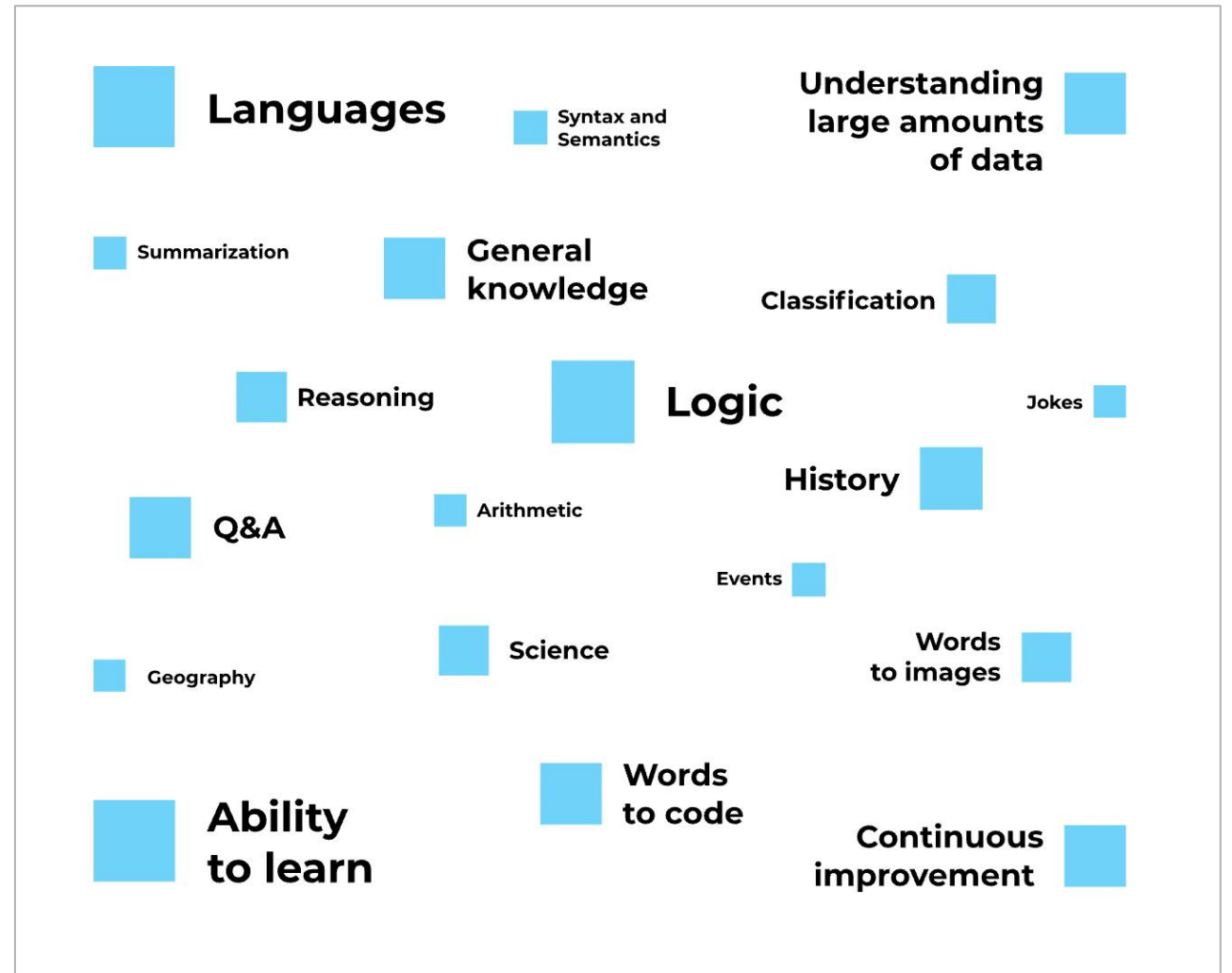
	AI (with human QA*)	Human (with QA*)
Short-form content creation (100-300 words)	30 minutes	3 hours
Medium-form content creation (300-600 words)	60 minutes	6-8 hours
Long-form content (800-1000 words)	2 hours	~10 hours
Content plan for 1 month	20 minutes	Up to a week
Google Ads (1 ad: 3 headlines, 3 descriptions, CTA)	15 minutes	2 hours

*QA –Quality Assurance

**How does AI
know what
content to
create?**

LLMs are trained on billions of parameters

Create content indistinguishable from what a human would write.



It is possible to teach AI to know everything the content team would know:

- Brand's historic information
- Brand voice
- Best-performing ads
- High-ranking (or any) web content
- Industry specifics, and more.

All at a scale that no single person can ever remember.



Multiple use cases

New and existing content

Any B2B, B2C or internal
communications



NLP at a glance

- Create new content
- Refresh existing text
- Produce variations
- Expand
- Summarize
- Change format
- Correct grammar
- Identify inconsistencies
- Extract keywords
- Classify, e.g., by type of intent
- Create descriptions based on a bulleted list of parameters
- Follow templates
- Rewrite to mimic a pattern
- And so much more

Marketing

- Content matched to customer intent
- SEO-friendly website copy
- Blog posts and articles
- Email marketing
- Press releases
- Ad copy (Google Ads, display etc.)
- Content plan, article and blog post ideas

E-commerce

- Writing or updating product descriptions
- Unique content and variations for SKUs
- Product FAQs
- Upselling and cross-selling content
- Category descriptions, product tags, meta
- Dynamic variations of e-commerce ad copy

Customer Support

- Help Center articles
- Knowledge base content
- Answers to common customer questions
- Product and how-to guides
- Troubleshooting content
- Tutorials, and more

Knowledge Management

- Employee handbooks and onboarding materials
- Company policies
- Product manuals
- Sales scripts
- Compliance training programs

Data-driven

Step 1

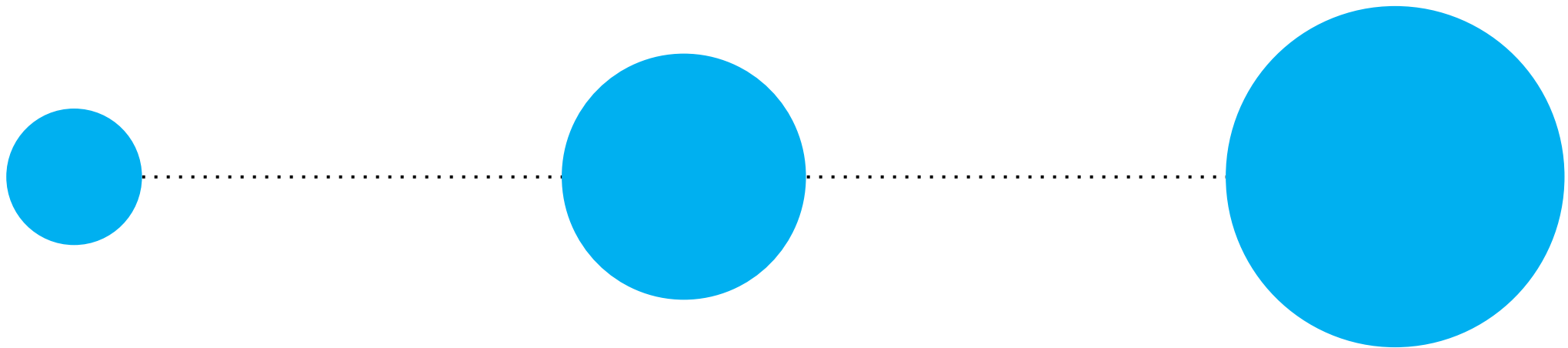
Non-PII data insights. Near real-time.

Step 2

A data set is updated for the brand and subject matter relevance. AI is trained.

Step 3

Content is generated by AI, reviewed and edited by content strategists and editors.

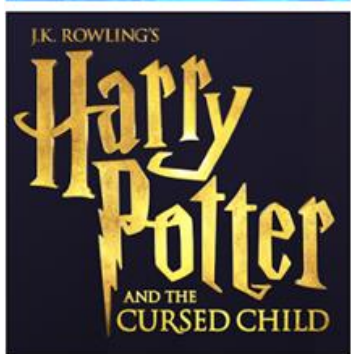
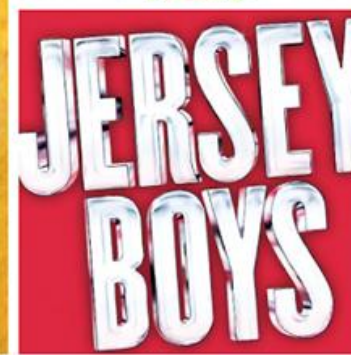


Content at scale that is hyper-relevant to the brand's communication goals and to audience interests.

No more guesswork.

AI for BROADWAY





1

Broadway as a category
1,079,793 keywords
39,480 questions

2

Individual shows
~50,000 keywords each
~5,000 questions each

INTENT

Near real-time analysis

Sources of data:

Search engine queries

Customer service questions

No social media listening at this stage



1

When will Broadway
reopen?

15,900

2

What to wear to a
Broadway show?

5,580

3

How much do Broadway
actors make?

4,100

What to wear to a Broadway show

What to wear to a Broadway show in the fall

What to wear to Hamilton Broadway show

What to wear to a Broadway show in winter

What to wear to Broadway show in summer

What should a woman wear to a Broadway show

What to wear to Lion King Broadway show

What to wear to a Broadway musical

What should I wear to Broadway show

What to wear to Broadway show men

What to wear to Broadway play

What to wear to matinee Broadway show

What do people wear to Broadway

What to wear to NYC Broadway show

What to wear to watch a Broadway show

Outfit ideas what to wear to a Broadway show



AI for Broadway

Connecting with audiences through content

BROADWAY

Inbound

CONTACT

SIGN UP

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The Phantom of the Opera FAQs

SHARE

FIND TICKETS

Broadway’s longest-running show, The Phantom of the Opera, is playing at the Majestic Theatre in New York City. Phantom continues to wow audiences today, just as it did when it first opened on Broadway back in 1988. Written by Andrew Lloyd Webber and based on the novel by Gaston Leroux, The Phantom of the Opera has become a true phenomenon. What makes a show that has been running for more than thirty years so popular? There is a number of reasons. The show’s romantic and haunting story, the gorgeous sets and costumes, and of course its beautiful musical score. With the story of a beautiful young soprano, Christine, and a mysterious phantom who haunts the Paris Opera House, The Phantom of the Opera is an incredible musical that is sure to thrill audiences of all ages.

The Phantom of the Opera is one of the best shows to experience with a group, be it friends, family, or colleagues. You get to make memories that will last a lifetime. You will be able to gush over how great the show was and how amazing the cast was. Phantom is a romantic mystery and a love story at heart. Seeing this musical makes you feel like a part of the story and it allows you to feel the emotions of the characters. If you’re looking to experience the magic that The Phantom of the Opera has to offer, [book your group tickets for The Phantom of the Opera](#) today.

> Are group tickets available for The Phantom of the Opera on Broadway?
> What is the minimum number of tickets for a group discount to The Phantom of the Opera?
> Are there additional discounts for student groups?
> Are complimentary tickets available when purchasing a large number of Broadway tickets for a group?
> Can I choose the seats when buying tickets for my group?

> [Are group tickets available for The Phantom of the Opera on Broadway?](#)

Yes, group tickets are available for The Phantom of the Opera, either online or by calling our Broadway Inbound Group Sales office at 212-302-0995. For more information, or to purchase group tickets, please see [the show schedule and ticket availability](#).

> [What is the minimum number of tickets for a group discount to The Phantom of the Opera?](#)

Group pricing for The Phantom of the Opera on Broadway applies to 10 or more tickets.

> [Are there additional discounts for student groups?](#)

Yes, there are special rates for groups of 10 or more students. To find out more about student discounts for The Phantom of the Opera, choose your date to [see ticket availability](#) in our real-time calendar, or call our Group Sales Office. [Broadway Inbound](#) is an official seller of group tickets for The Phantom of the Opera and other Broadway shows.

> [Are complimentary tickets available when purchasing a large number of Broadway tickets for a group?](#)

Complimentary tickets are sometimes available. Please [contact us](#) to discuss the size of your group.

> [Can I choose the seats when buying tickets for my group?](#)

Yes. When you purchase tickets for your group, you start by selecting the section in the theatre. Once your group tickets are confirmed, you will know the exact seat locations for your group before you make a payment.

BROADWAY

Inbound

CONTACT

SIGN UP

LOGIN

Hamilton FAQs

SHARE

FIND TICKETS

Hamilton is a unique and exhilarating musical about the life of Alexander Hamilton, one of our nation’s Founding Fathers. With its revolutionary score, Hamilton is a must-see for theatre fans and history buffs alike. Created by Lin-Manuel Miranda, it is a one-of-a-kind musical. With the high-energy songs at the heart of the show, Hamilton features a cast of diverse, talented, and immensely gifted actors and actresses. The show has received immense critical acclaim and is another in a long line of cultural phenomena to come out of New York City. The popularity of the musical has boosted the popularity of history and arts.

There’s a reason why Hamilton is the hottest Broadway show in New York City – and beyond. It’s a phenomenon. It’s history being brought to life, and it’s happening right now. The hip-hop musical tells the story of the brilliant, complex and flawed Founding Fathers whose story has been told many times, but never like this. The result is a production that is both entertaining and educational, providing a fresh and compelling take on one of America’s most important figures.

Broadway productions are always a fun night out with friends, but Hamilton is an especially great choice if you’re looking to enjoy a group outing. This production has become one of the most popular and critically acclaimed musicals in recent years and is sure to be the perfect choice for a night on the town with a group of friends or colleagues.

New York City’s Broadway is where the biggest and brightest stars of theatre perform. From classic musicals to cutting-edge plays, there’s something for everyone to enjoy. From the moment the lights dim and the curtain rises on a Broadway show, theatregoers are transported into a unique and special world. Broadway is the pinnacle of theatre, and its productions feature the best of the best in terms of acting, singing, and dancing. Whether you’re a first-time visitor or a Broadway regular, we’ve got the information about all [shows currently running on Broadway as well as upcoming productions](#).

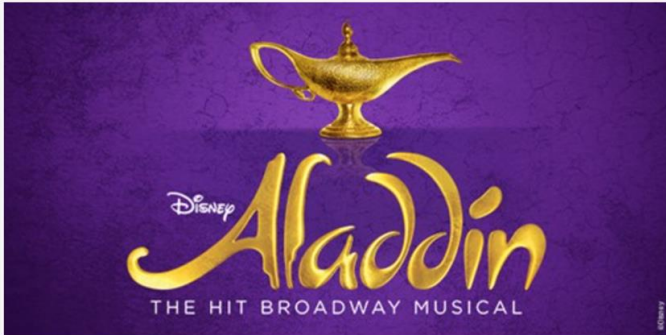
> Are there group rates for Hamilton on Broadway?
> What is the minimum number of tickets to qualify for group rates for Hamilton in New York City?
> Are there discount tickets for Hamilton?
> Can I choose seats for my group?
> Is Hamilton still on Broadway?
> How long has Hamilton been on Broadway?
> What is the duration of Hamilton on Broadway?
> What is the recommended audience age for Hamilton?
> Where is Hamilton playing on Broadway?
> What is the seating capacity of the Richard Rodgers Theatre?
> What are the best seats at Richard Rodgers Theatre?
> Is proof of vaccination required for Hamilton?
> Do I need to wear a mask during the show?
> What time should I arrive at the theatre?
> What is the dress code for Hamilton on Broadway?

What Broadway Shows are Open Now

Last updated on January 26, 2022

Theatres around the city have reopened their doors and are welcoming audiences back to Broadway from all over the world. While some concerns about the Corona virus remain, with carefully considered [safety measures](#) in place, it feels good to be back in the Theatre District and taking in a show. Whether you're a longtime fan or new to the Broadway scene, here's a guide to what shows are open on Broadway right now.

Shows listed in alphabetical order.



Aladdin

What would you wish for? This is the question at the heart of *Aladdin*, the hit Broadway musical. The answer, it seems, is everything. *Aladdin* is the story of a street urchin who finds a magic lamp, releases a genie, and falls in love with the princess. It's a thrilling tale of adventure, courage, and self-discovery. The score is packed with memorable songs, including "Friend Like Me," "A Whole New World," and "Prince Ali." The sets and costumes are stunning, and the cast is a mix of Broadway veterans and up-and-coming stars. If you're looking for a show that will make you laugh and cry, *Aladdin* is the one. So be sure to wish for a ticket!

New Amsterdam Theatre
214 West 42nd Street
New York, NY 10036



Chicago

Chicago is a classic Broadway show that has wowed audiences for years. The tale of murderesses on trial is a captivating story that will keep you on the edge of your seat. The music is catchy, and the dancing is amazing. If you're looking for a great show to see in New York City, be sure to check out *Chicago*. So step into the city that never sleeps and discover all that jazz. You'll know why *Chicago* is one of the hottest shows on Broadway!

Ambassador Theatre
219 West 49th Street
New York, NY 10019

Running time: 2 hours and 30 minutes with one 15 minute intermission

[Group tickets for Chicago on Broadway](#)



Fine-tuning the AI model

The model was trained to imitate style and “voice” of Broadway Inbound

With just 200 articles (150,000 words) as examples, we were able to achieve outstanding results.



An example of original content from Broadway Inbound to train the model

12 Days of Christmas In New York City

From classics like *Miracle on 34th Street* to childhood staples like *Home Alone 2*, you've seen a hundred movies set in New York City during the holidays. And with good reason; this time of year, you'll find magic around every corner—and we've put together a guide to make sure you don't miss any of it.

It wouldn't be a trip to New York City without a show, which is why we're kicking off this list with two that are synonymous with the holidays...

At Lincoln Center, George Balanchine's *The Nutcracker* has been dazzling audiences for over fifty years. Let the New York City Ballet steal you away to the Land of Sweets, where dolls become princes and the Sugar Plum Fairy reigns, in this timeless holiday tradition.

On the other side of town, you can catch *The Christmas Spectacular Starring the Radio City Rockettes*. Featuring iconic numbers like the classic *Wooden Soldier* Fall and a Living Nativity scene complete with camels, it's truly unforgettable. Plus, it's right next door to...

A backstage drama rich in heritage, *Indecent*, by Pulitzer Prize winner Paula Vogel, is inspired by the true events surrounding the controversial play *God of Vengeance*. That production toured Europe and New York to great acclaim in 1923. When it got to Broadway, it was condemned as "indecent" for depicting a love scene between two women. The actors were jailed, but despite the dire circumstances, they continued to perform the play as an affirmation of life.

Staged in a vibrant production, filled with music and stunning visuals by Tony® winner Rebecca Taichman, *Indecent* is a tribute to the transcendent power of art. Broadway Inbound was fortunate enough to speak with Vogel in a wide-ranging conversation about art and the relevance of her play in 2017.

Vogel first read *God of Vengeance* when she was 22 years old. "I thought it was stunning," she recalls, "I read it standing up in the library stacks. I couldn't breathe during the second act. The love scene between the two women was akin to *Romeo and Juliet*. I never forgot it." Vogel treasured Sholem Asch's play as one of her favorites, so when she received a phone call 10 years ago from director Rebecca Taichman to collaborate on a play, it was an easy "yes."

The Phantom of the Opera

Content created by a trained AI model

“Here is why we at Broadway Inbound think it's a perfect show for groups:

It's a classic. There's nothing quite like seeing a Broadway classic. For everyone in your group, no matter what your age, *The Phantom of the Opera* is an experience they won't forget. If your group is new to Broadway, *The Phantom of the Opera* is a great first show. It's got it all: romance, a tragic love story, memorable songs, and of course, the chandelier.

That chandelier! As beautiful and impressive as the chandelier is, this show is all about the music. Score after score, the music in *The Phantom of the Opera* keeps the story moving and the audience engaged. From the beginning overture, there is not a lull in the whole night. In case you don't know, the man who wrote this show, Andrew Lloyd Webber, is a genius and his unmistakable music really resonates with you.

Breathtaking stagecraft. The set of *The Phantom of the Opera*, when viewed from the orchestra pit, seems flat, but wait until a scene changes and you see the construction and ingenuity that went into building the Phantom's world underground in the Opéra Garnier.

If you're looking for a show that is family-friendly, but still packs a punch, *The Phantom of the Opera* is a perfect choice. You'll be instantly captivated by the gorgeous scenery and costumes in this beloved musical that contains many gems, including one of the signature songs “Music of the Night.”

The Phantom is a legendary piece of Broadway history, and it's easy to see why it's been running on Broadway for more than three decades. If you're ready to book your group tickets to *The Phantom of the Opera*, just click the link below.”

Come From Away

Content created by a trained AI model

“Here is why we at Broadway Inbound think it's a perfect show for groups:

This show makes you feel good, and it should—this is the story of real people doing the right thing. If you’re looking for a show that’s big and beautiful and full of heart, we highly recommend you book your group tickets to *Come From Away* today. We all want to see art that challenges, that provokes, that makes us think. But for a group experience, *Come From Away* is a show that gives us something else too. It’s a story about how, when the world seems broken and we’re afraid of the people around us, our capacity as humans to connect and to love is what we need most – when the world feels scary and dark, we can still find the light inside each other. What better way to show your group the best of Broadway than by showing them the best of humanity?

A true story of human kindness in the face of adversity, it will make you laugh and cry in equal measure. Through its captivating score, ingenious staging, and unforgettable cast, it is a celebration of the human spirit. *Come From Away* is a heartwarming reminder that, in the face of tragedy, people can find common ground, forge new friendships, and rebuild their lives. Feel the warmth of being welcomed into the homes of the real characters of this story.

Come From Away recognizes that “ordinary” people can do the extraordinary. With so much negative news around the world, this is a show that gives you hope for the human race. To purchase group tickets to *Come From Away*, visit....”

Results

AI content is 37.4% of all organic traffic

Keywords +177%
Traffic +22% vs peak in 2019

Performance

☐ Referring domains ☐ URL Rating ☒ Organic traffic ☐ Organic traffic value ☐ Organic pages ☐ Paid traffic ☐ Paid traffic cost





"Creative AI"

Fact-checking is
essential to any content
generation

The Lion King synopsis

"The Lion King musical on Broadway tells the story of the young lion prince, Simba, who is destined to be king. Simba's evil uncle, Scar, had other plans and plots to usurp the throne and kill Simba and his family. Scar succeeds in killing Simba's father, Mufasa. Simba is saved from Scar's clutches and **raised by a family of meerkats**. As the years pass, Simba and his friends Timon and Pumbaa live in the jungle and forget about their past. One day, Simba's friend, Nala, arrives and tells him that Scar is abusing the animals in the kingdom. Simba is advised by his good friend, Rafiki, to go back to the Pride Lands and confront Scar. Simba and his friends return and overthrow Scar, and Simba takes his rightful place as king."



"Creative AI"



A Christmas Carol

"A Christmas Carol 2021 at Golden Gate Theatre in San Francisco, CA is a futuristic adaptation of this classic story. This time, the tale is told through the eyes of a cyborg named "Scrooge" and the ghost of his future self. Travel with Scrooge and experience the future of Christmas."

Results from other industries

From brief to publication – at least 5x faster

Cost savings – 50% on average

Organic traffic growth – 60% or higher

**AI is still
in its
infancy**

Bias

Facts

Disinformation

DEI in AI

A project to identify biases in AI-generated content

✓ **Historical data bias**

A set of resources to help anyone working with AI identify potential bias in content and flag it to businesses and individuals using AI in their work.

✓ **DEI dictionary on GitHub**

A DEI dictionary available for anyone for free on the internet through GitHub and other channels to then be plugged into their workflows. The dictionary is a list of terms that are connected to different types of bias and can be used to help identify and flag bias in content.

Types of vendors

Software as a Service

copy.ai, Jasper

- Perfect for freelancers
- Foundation model
- Great for overcoming the writer's block

Service as a Software

Intentful

- A model fine-tuned specifically for a brand
- Integration of data insights
- Turnkey content delivery or a hybrid



The traditional approach
to creating content
no longer works

There is no way
to keep up with the digital age
using the old ways

FACES OF CONTENT PAIN

What face of content pain are you?



So much
content
to produce



Who will
write it?

What will they
write?



The
budget is...



HOW long?



Revision
round 6?



Whatever



No one reads
our content

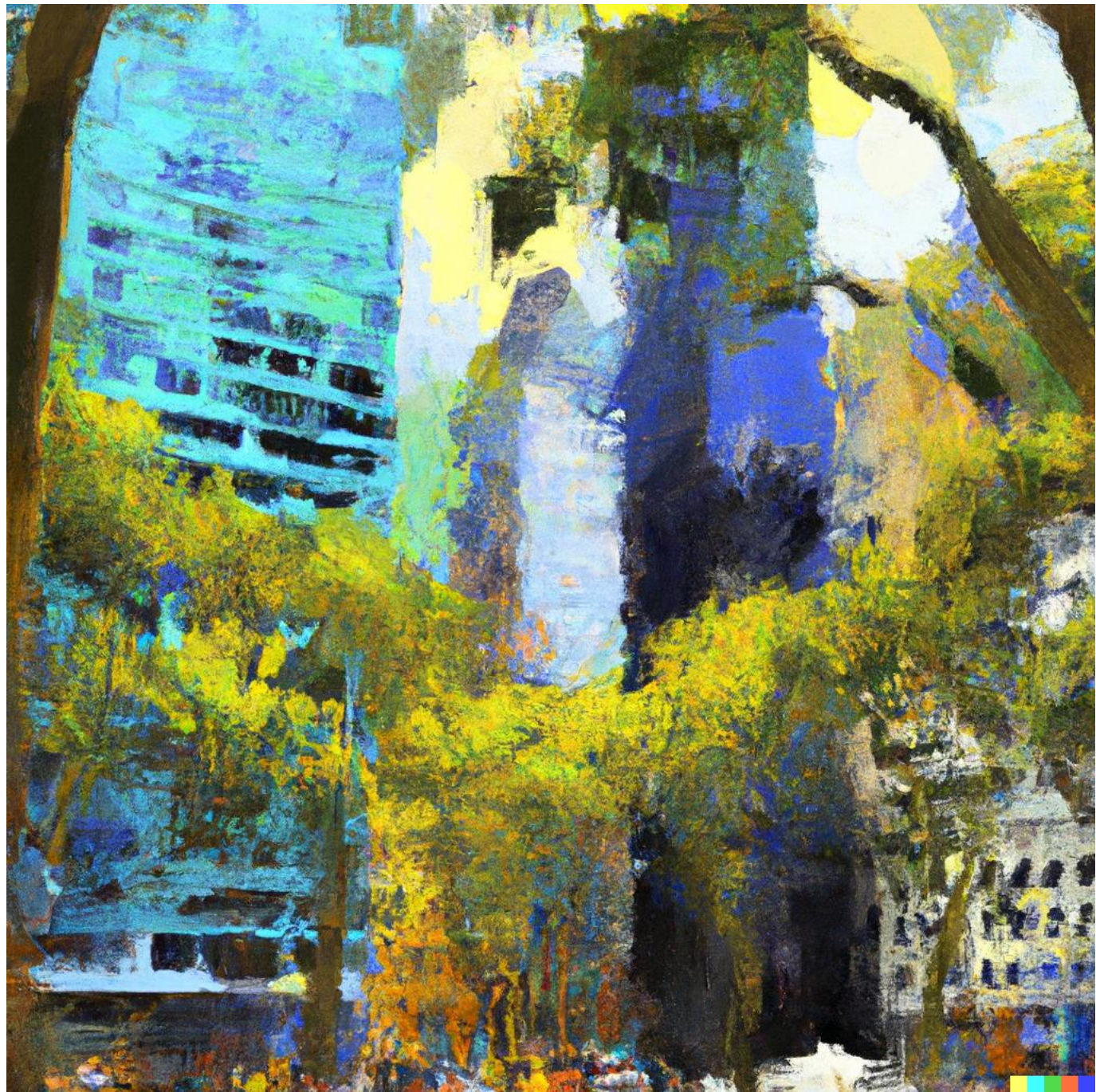
“A surrealist dream-like oil painting by Salvador Dalí of a cat playing checkers”



“A macro 35mm photograph of two mice in Hawaii, they're each wearing tiny swimsuits and are carrying tiny surf boards, digital art”



“A modern-art style
painting of Bryant
Park”





A painting of A Christmas Carol where Scrooge is a cyborg and the ghost of his future self (v1 – photorealistic bw; v2 – sci-fi)