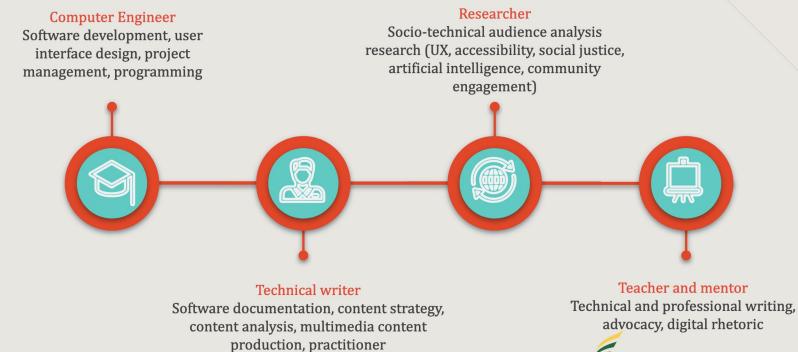
AI & TC

Nupoor Ranade (she/her)

Assistant Professor Professional and Technical Writing Program Department of English









> NC STATE UNIVERSITY

Al in STEM

Books

ai in st	em		
	News	Images	Videos

X 🤳 Q

Tools

: More

Past year
Sorted by date
Hide Duplicates
Clear

Techopedia FinalSpark



Jordan discussed how FinalSpark uses living neurons from human stem cells for advanced computing. We also talked about the ethical considerations of this...

1 hour ago

ClarkNow

'You can do it, too' - Clark Now | Clark University

Al in Biotechnology: Interview with Dr Fred Jordan,

... Technology students and other STEM majors. ... One of those changes is the speedy development of artificial intelligence, or AI, technology and its impact on the... 1 hour ago

Bhow Me Mizzou

Virtual reality simulations can help autistic people complete

Using artificial intelligence (AI), the research team found that autistic ... technology, engineering and math (STEM)-related fields," Glaser said. "These ... 2 hours ago

NWI Times

....

Hammond students take part in AI and STEM event at PNW



Tarter Krinsky Drogin

Hammond middle school and high school students engaged with artificial intelligence and activities involving science, technology engineering and math at an... 1 day ago

S JD Supra

Biden's Artificial Intelligence Proposals May Help High Skilled In addition, the program would inform top STEM talent of nonimmigrant and immigrant

visa options and potential expedited adjudication of their visa petitions...



ai in english majors < All News Images Books Videos



Past year - Sorted by relevance - Clear

The New Yorker

The End of the English Major

(English majors, on average, carry less debt than students ... "Now they would be about people working in artificial intelligence or natural-language processing. Feb 27, 2023



X 🌷 Q

Tools

Massachusetts Daily Collegian

Why is AI only coming for English Majors?

Al may be adept at accessing, analyzing and reproducing pre-existing work from writers, but it cannot create something entirely original. Its abilities may be ... Oct 4, 2023

Inside Higher Ed

The English Degree Is Great Job Preparation

As we confront a world where artificial intelligence has a greater and greater presence, I think some good old humanities majors who can problem-solve and have ...

Feb 28, 2023

MG The American Genius

Why English majors are the future of the AI revolution



But that is where the English major powers come in - copywriters are paid well because they can not only write skillfully, but because they can look at what you ... Oct 12, 2023

Bloomberg.com

ChatGPT vs. English Major : AI Writes Essays But Can't ...

Will all the future English majors be chatbots? But first... Today's must ... But at the same time, a world where people outsource more and more of their writing to ... Mar 17, 2023



1 day ago











Transhumanism

Humans can and should use technology to transcend their biological limitations



Posthumanism

The traditional concept of "human" is no longer relevant, and we need to rethink our relationship with technology.



Augmentation

The use of technology to improve human capabilities. It is a practical way to improve our lives, and it is already being used in a variety of ways.



Transhumanism

Humans can and should use technology to transcend their biological limitations



Posthumanism

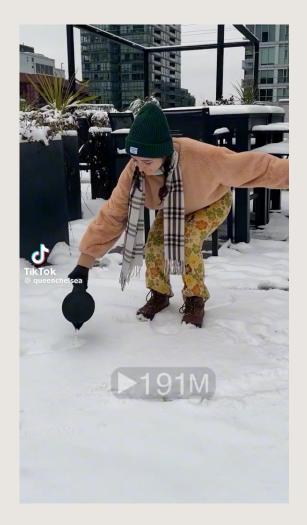
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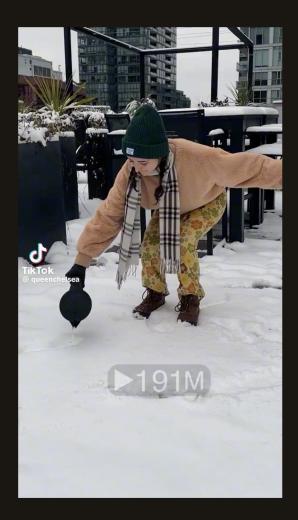


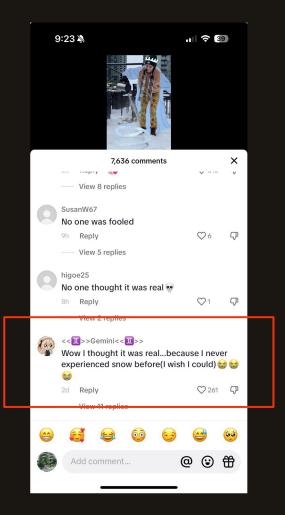
Augmentation

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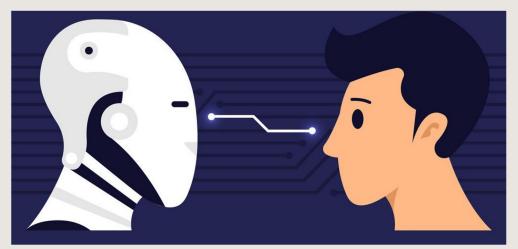








AI VS Human



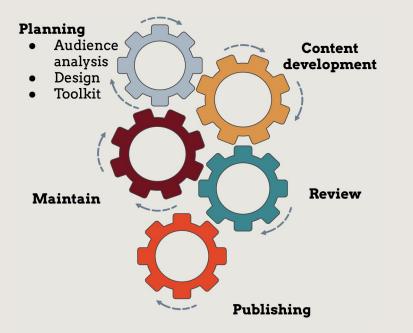






President Biden's Landmark Executive Order on Artificial Intelligence Will: Ensure safety and security Protect Americans' privacy Advance equity and civil rights Stand up for consumers and workers Promote innovation and competition

Ensure responsible and effective government use of AI ALGOV Safe, Secure, and Trustworthy development.



Documentation Development Life Cycle (DDLC)

Technical communication involves the delivery of clear, consistent, and factual information often stemming from complex concepts.





Human augmentation and AI in TC

CONTENT DEPLOYMENT

Al transparency

01

02

03

04

05

CONTENT DEVELOPMENT

Rhetorical prompt-engineering

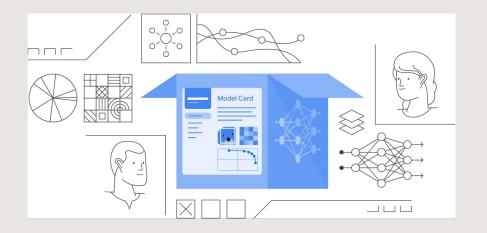
Ethical editing

USER RESEARCH

User analysis through users' contributions Equity and social justice



CONTENT DEPLOYMENT



Model Cards for Al Transparency

- Model cards are a standardized way of documenting the key information about an AI model, including its training data, performance metrics, and potential biases.
- Model cards can help users understand how an AI model works and make informed decisions about how to use it.
- Other terms: Method cards, Datasheets for Datasets, FactSheets, Data Statements

Model Cards for Al Transparency: Literature review



Users

(Wadhwani & Jain, 2020; Nunes, et. al., 2022)

- Producers
- Agents
- Reviewers
- Users



Standards

(Mitchell, et. al., 2019)

- Consistent
- Comprehensive
- Intelligible and Concise
- Explainability, Uncertainty
- Principles
 - Flexible
 - Modular
 - Extensible
 - Accessible



Evaluation

(Boyd, 2021; Crisan et. al., 2022; Pushkarna, et. al., 2022)

- Tailored for stakeholders
 - Stakeholders, Language
- Design Considerations
 - Information Design, Visual and Interaction Design,
 - Implementation, Integrated
 - Tooling
- Guidance
- Trust and Safety
- Sensemaking and Skepticism
 - Contextualization, Data
 - Analysis, Examples,
 - Information Seeking
 - Interpretation

Model Cards for Al Transparency: Literature review



Users

(Wadhwani & Jain, 2020; Nunes, et. al., 2022)

- Producers
- Agents
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Standards

(Mitchell, et. al., 2019)

- Consistent
- Comprehensive
- Intelligible and Concise
- Explainability, Uncertainty
- Principles

Writing and Editing



Evaluation

(Boyd, 2021; Crisan et. al., 2022; Pushkarna, et. al., 2022)

- Tailored for stakeholders
- Design Considerations
- Guidance
- Trust and Safety
- Sensemaking and Skepticism

Content strategy and Accessibility

02 Rhetorical promptengineering

CONTENT DEVELOPMENT

Best practices for generating prompts for generative Al VS **General formula for** prompt generation



General formula for prompt generation (TLDR!)

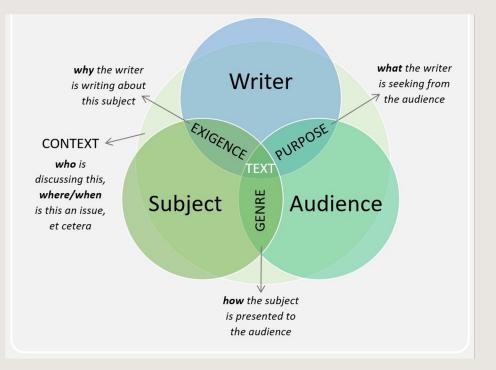
Prompt = (audience + genre + purpose + subject + context + exigence + writer)

Audience = the intended reader demographic of the content and their characteristics Genre = preferred genre selection Purpose = the author's purpose for writing or the reader's purpose for reading Subject = focus and details of the content Context = the relevant circumstances outside of the content Exigence = the demand to write the content Writer = the intended writer of the content



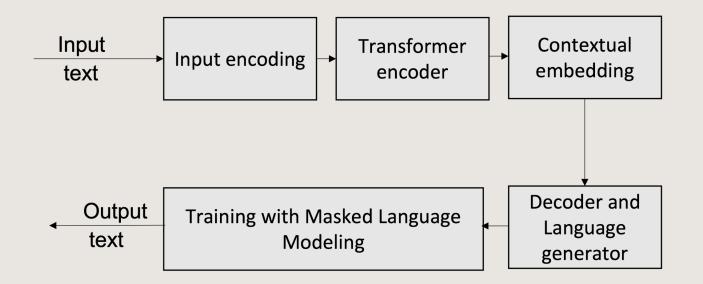
Rhetorical situation

A rhetorical situation is "a natural context of persons, events, objects, relations, and an exigence which strongly invites utterance; this invited utterance participates naturally in the situation, is in many instances necessary to the completion of situational activity, and by means of its participation with situation, obtains its meaning and its rhetorical character"





Generative Pre-trained Transformers architecture





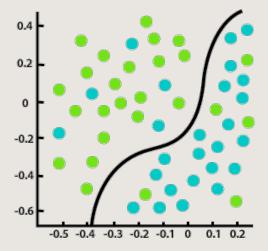
Contextual embedding

Man :: King Man :: Brother Woman :: Queen Woman :: Sister



Identifying intent through classification

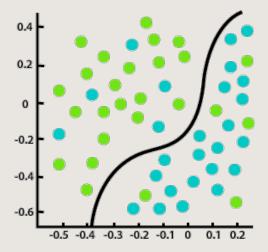
	text	category
27	I am overseas in China, can I get a replacement card?	card_about_to_expire
370	If I am in China, can I still order a new card and if so, how?	card_about_to_expire
441	My card is almost expired. How fast will I get a new one and what is the cost?	card_about_to_expire
477	My card is about to expire. Do I have to go to a branch to order a new card?	card_about_to_expire
521	My card expires soon, will you send me one automatically?	card_about_to_expire
524	My card expires very soon. What is the cost and delivery time to get a new one?	card_about_to_expire
551	Where can I have a new bank card sent to China?	card_about_to_expire
584	How do I get a new expiration date?	card_about_to_expire
605	Are there any express fees if i want my new card faster?	card_about_to_expire
646	My card is almost going to expire.	card_about_to_expire
765	My card expires soon	card_about_to_expire
812	What is the cost and time frame of getting a new card?	card_about_to_expire
833	Help me order a new card that's going to be expired soon.	card_about_to_expire
888	What happens if my card expires?	card_about_to_expire





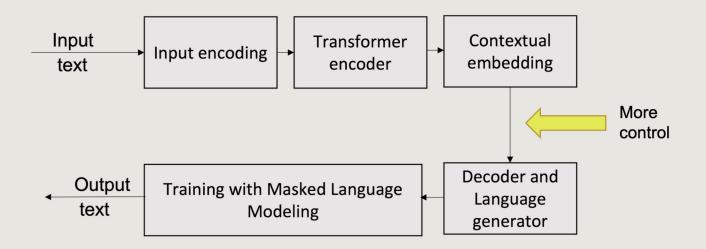
Identifying intent through classification

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521	My card expires soon, will you send me one automatically?	card_about_to_expire
524	My card expires very soon. What is the cost and delivery time to get a new one?	card_about_to_expire
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584	How do I get a new expiration date?	card_about_to_expire
605	Are there any express fees if i want my new card faster?	card_about_to_expire
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765	My card expires soon	card_about_to_expire
812	What is the cost and time frame of getting a new card?	card_about_to_expire
833	Help me order a new card that's going to be expired soon.	card_about_to_expire
888	What happens if my card expires?	card_about_to_expire





Generative Pre-trained Transformers architecture





General formula for prompt generation (TLDR!)

Prompt = (audience + genre + purpose + subject + context + exigence + writer)

Audience = the intended reader demographic of the content and their characteristics Genre = preferred genre selection Purpose = the author's purpose for writing or the reader's purpose for reading Subject = focus and details of the content Context = the relevant circumstances outside of the content Exigence = the demand to write the content Writer = the intended writer of the content



2. White Paper

Prompt Variation	Prompt
Writer + context	"In the current market, no social media app focuses solely on professional networking. A group of developers are looking to launch their app for professional networking with current and potential colleagues."
Writer + purpose + context	"In the current market, no social media app focuses on professional networking. A group of developers are looking to launch their app for professional networking and entice people ."
Writer + purpose + exigence + context	"In the current market, no social media app focuses on professional networking. Based on its potential , a group of developers are looking to launch their app for professional networking and entice people."
Writer + purpose + exigence + genre + context	"In the current market, no social media app focuses on professional networking. Based on its potential, write a white paper for a group of developers on their professional networking app to entice readers."
Writer + purpose + exigence + genre + subject + context	"In the current market, no social media app focuses on professional networking. Based on its potential, write a white paper for a group of developers on their professional networking app to entice readers. Be sure to include features of the app that address the defined problem. "
Writer + purpose + exigence + genre + subject + audience <u>+ context</u>	"In the current market, no social media app focuses on professional networking. Based on its potential, write a white paper for a group of developers on their professional networking app to entice users and potential investors . Be sure to include features of the app that address the defined problem."

Rubric Development

Table 2 Rubric considering AI-generated components to assess work

Table 2 Rubite considering Ai-	generated components w	J assess work		
Criteria	А	В	С	D
Readers/Audience				
Characteristics				
- Audience is explicitly				
mentioned				
- Style and voice are used to			The audience is	
compliment audience	Audience is clearly	The audience is	somewhat	
demographic and attitude	considered in text and	frequently considered	considered and at	
- Specified recommendations or	all three	and at least two	least one	The audience is
actions are catered toward the	characteristics are	characteristics are	characteristic is	considered but no
audience	present.	present.	present.	evidence found
Rhetorical Purpose			Purpose is	
_	Purpose of text is		mentioned and	Purpose is
	clearly explained and	Purpose is explained	somewhat targeted	mentioned but not
	highly targeted for a	and targeted for a	for a specific	targeted for a
	specific audience.	specific audience.	audience.	specific audience.
Language Use				
Errors				
- Spelling, grammar, word	1 or fewer errors per	2 or fewer errors per	3 or fewer errors	4 or more errors per
usage, and punctuation	page.	page.	per page.	page.
Genre	1-8-	F-8-	F F - O	1-0
Specified Characteristics				The text is defined
- User Guide: task based	The text is structured		The text is defined	
instruction	as belonging to a	The text is defined as	as belonging to a	certain genre with
- Memo: letter format	certain genre with all	belonging to a certain	certain genre with	none of the
- White Paper: introduction,	specified	genre with some	limited	specified
body, and conclusion	characteristics.	characteristics.	characteristics.	characteristics.
Organization of Writing				
Specified Principles and				
Organization				
- User Guide: chronological				
organization, less than seven				
bullet points or steps,				
conciseness, active voice,				
limited use of long sentences			The text contains	
- White Paper: spatial			either a few	The text contains,
organization, summary at the	The text contains all	The text contains few	specified	neither, the
beginning of the paper,	specified principles	specified principles	principles relevant	specified principles
background on specified issue	relevant to genre and	relevant to genre but	to genre or the	relevant to genre or
and presented explanation,	uses the appropriate	uses the appropriate	appropriate	the appropriate
appropriate conclusion/solution	organization type.	organization type.	organization type.	organization type.

Google	site:ahrefs	.com SEO			× 🌷	۹
Q All 🖾 Images	🗉 News	▶ Videos	Books	: More		Tools

About 4,330 results (0.54 seconds)

https://ahrefs.com > blog > seo-basics

SEO Basics: Beginner's Guide to SEO Success - Ahrefs

6 Sept 2022 — Search engine optimization (SEO) is the process of growing a website's organic search traffic. It's where you do things that help you show ...

https://ahrefs.com> seo

SEO: The Complete Guide for Beginners - Ahrefs

SEO (Search Engine Optimization) is the practice of growing a website's traffic from organic search results. It involves things like keyword research, content ...

Other uses of rhetorical prompt engineering

Jordan

Hi, I need to switch to a later flight.

Arrow Air - Al Guide

Hello, Jordan. It's Jett, your Al guide.



Good news! There's a Business Class seat available on the 7:20 PM flight from SFO to LAX. Sound good?







Technical editing

Programmatic approach

- Knowledge of the rules involved (grammar, punctuation)
- Knowledge of how to apply the rules correctly
- Ability to apply the rules consistently throughout an editorial project
- Ability to interpret the rules to the author

Rhetorical approach

- Breadth of perspective
- Investigative persistence
- Flexibility
- Rhetorical knowledge and taste
- Empathy
- Self-confidence



Folklore is a body of lore, stories, traditions, and customs held by a group AI cultures have their folklore which is passed down through oral tradition. Over time, folklore becomes exaggerated, embellished, and part of the nation's history.

Every culture has its own folklore, which tends to embellish over time. For example, American embraced European folklore as their own in the late 19th century and early 20th century. They embellished it with their characters, places, and events- creating a new form of folklore. In the same way, Chinese Americans have created American versions of Chinese food, dancel and games based on Chinese culture. This is called Americanized Chinese cuisine, dance, and games,

Folklore contains many imaginary animals, plants, objects, characters, and events. For example, in American folklore, a cow could become a dragon at night. Another common American folkloric animal is the cat. It can take on human form and have conversations with people. In Greek folklore, dragons are legendary creatures with long syringes for tails and breathing fire. Other famous mythical creatures include unicorns, princesses, mermaids, and fairies, Germany has famous folklore characters like Hans Christian Andersen's Little Red Riding Hood or the fairy tale heroine Cinderella.

People create new folklore based on real events and places under the name of folk art or folk exploitation. For instance, when Stephen King moved to Derry, Mainel in 1961- he became inspired to write his best-selling book 'The Stand.' The city inspired him to name his main character 'Stan' after himself People also use real locations for folk art productions such as plays or poetry. Some famous folk artists include Tom Bodett (the Pilgrims), Henry David Thoreau (the Maine Woods) and Walt Whitman (the American wilderness).

Folklore is a rich source of information about past cultures worldwide. It is usually passed down through oral tradition and can become embellished over time. People create new folklore based on real events under the name of folk art or folk exploitation. Everyone has their folklore that becomes part of their national history!

Arushi Bhatt	Deleted: that are	AB	Arushi Bhatt	
Arushi Bhatt	Deleted: of people	-	Unnecessary words	
Arushi Bhatt	Deleted: It is believed that			
Arushi Bhatt	Deleted: a	Rej	bly	
Arushi Bhatt	Deleted: own			
Arushi Bhatt	Deleted: . Folklore			
Arushi Bhatt	Deleted: usually	AB	Arushi Bhatt Unnecessary words	
Arushi Bhatt	Deleted: and		Onnecessary words	
Arushi Bhatt	Deleted: ;	Rej	oly	
Arushi Bhatt	Deleted: this is how it becomes			
Arushi Bhatt	Deleted: ;			
Arushi Bhatt	Deleted: it	AB	Arushi Bhatt	
Arushi Bhatt	Deleted: be		To change from passive to active voice	
Arushi Bhatt	Deleted: ed			
Arushi Bhatt	Deleted: , Americans embraced ψ	Rej	bly	
Arushi Bhatt	Deleted: own			
Arushi Bhatt	Deleted: their			
Arushi Bhatt	Deleted: own	AB	Arushi Bhatt	
Arushi Bhatt	Deleted: impossible, impossible, and		Redundant word	
Arushi Bhatt	Deleted: ;	Rej	oly	
Arushi Bhatt	Deleted: i			
Arushi Bhatt	Deleted: that have			
Arushi Bhatt	Deleted: e	AB	Arushi Bhatt	•••
Arushi Bhatt	Deleted: In	-	Merged sentences for clarit	y
Arushi Bhatt	Deleted: they have	Des		
Arushi Bhatt	Deleted: E	Rej	JIY	
Arushi Bhatt	Deleted: (FACEBOOK link).			
Arushi Bhatt	Deleted: itself	AB	Arushi Bhatt	•••
Arushi Bhatt	Deleted: in chapter one of his book	•	Rephrased for clarity	
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Arushi Bhatt	Deleted: own			
		AB	Arushi Bhatt Rephrased for clarity	•••

Reply

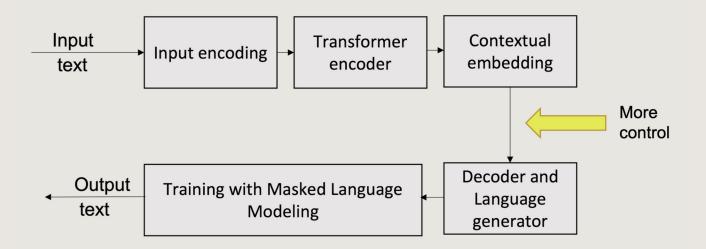
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The edits that Al 'sees'



The edits that AI cannot see

Generative Pre-trained Transformers architecture



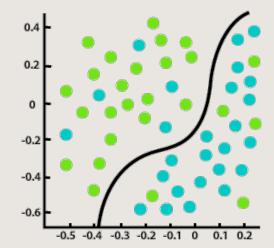


(Zhai, 2022)

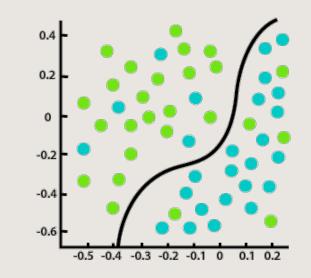


Man :: King

Woman :: Queen



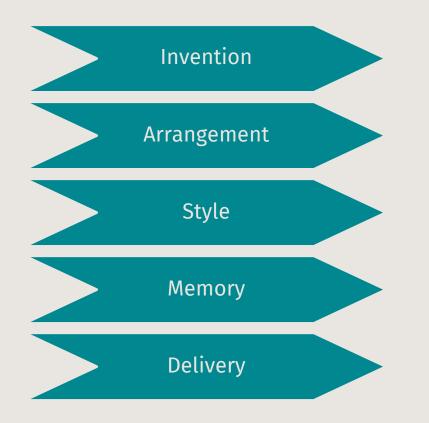




Man :: King Man :: Brother Man :: Doctor Woman :: Queen Woman :: Sister Woman :: ? Man :: King Man :: Brother Man :: Doctor He :: Realist

Woman :: Queen Woman :: Sister Woman :: Nurse She :: Feminist

Canons of rhetoric



We make choices throughout the process of developing content. The five canons help us organize how we examine those choices.



Framework for ethical editing

Possible Factors to fill in the ____

Race Ethnicity Culture Religion Sex Gender **Sexual Orientation** Age Socioeconomic Status With each canon, we can ask how we are or are not communicating about ____, with ____ being any factor of concern for conscious inclusion.



Arrangement

=

SUBSCRIBE

- 1. Is <u>relevant to your</u> audience?
- 2. Is ____ relevant to your message?
- 3. How does your message consider ____?



HOME > TV > TV NEWS

=

Kit Connor, Kate Winslet Among Winners of Royal Television Society Program Awards

BBC chief content officer Charlotte Moore won the judges' award, while 'Happy Valley' star Sarah Lancashire was honored with the lifetime achievement award.

BY ALEX RITMAN MARCH 29, 2023 2:29AM





Kit Connor ROYAL TELEVISION SOCIETY



Listen to this article

Hollijreporter

=

Kit Connor and Kate Winslet were among the major winners at the 2023 Royal Television Society program awards on Tuesday night in London.

hollywoodreporter.com

Winslet claimed the leading actress award for her performance in Channel 4 drama *IAm Ruth* — in which she starred alongside her daughter Mia Threapleton — while Connor won the leading actor honor for his breakout turn in Netflix's hit series *Heartstopper*.

For the 2023 awards, several new awards were introduced, including supporting actor – female, which was claimed by Ambita Mod for the BBC/AMC NHS comedy-drama *This Is Going to Hurt* (which also leads the BAFTA TV awards nominations), and supporting actor – male, which went to *Sweet Tooth* star Adeel Akhtar for the BBC series *Sherwood*. Meanwhile, Sky's *Brassic* won the inaugural comedy drama award. Other winners on the night included Raw's Netflix hit *The Tindler Swindler*, which won the single documentary honor, and *Succession* writer Lucy Prebble, who won writer – drama for Sky series *I Hate Suzie Too*. hollywoodreporter.com

Hollywood subscribe

Kit Connor and Kate Winslet were among the major winners at the 2023 Royal Television Society program awards on Tuesday night in London.

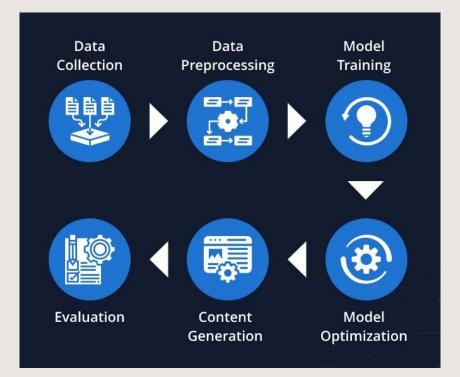
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Uses of ethical editing

- Data preprocessing
- Fine tuning
- Content evaluation





04 User analysis through users' contributions

USER RESEARCH

Types of interactions for user research

Explicit contributions

Eg. Comments Social media Forum posts Implicit contributions

Eg. Data analytics Algorithmic data Data that's always already present

Case study: Web analytics



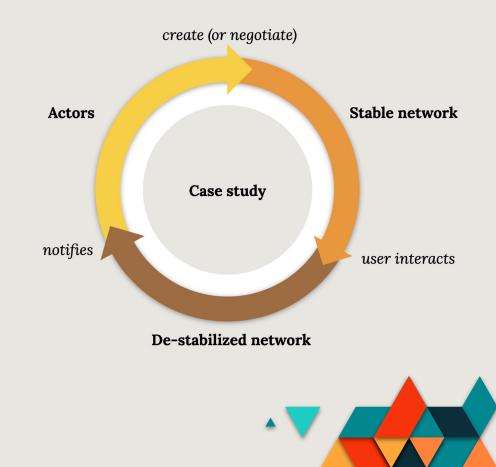
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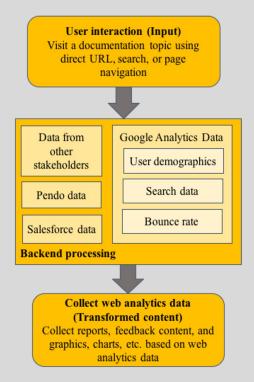
- Google Analytics
- Pendo
- Salesforce

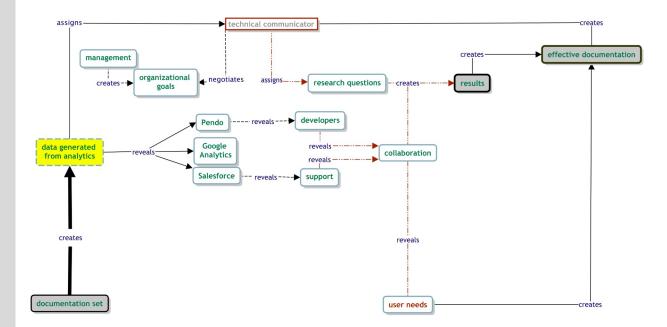


Actor network Theory

"ANT is a social theory framework which puts emphasis on the concept of nonhuman actors and the interplay between entities with agency, human and nonhuman actors, as well as relations formed by negotiations and interactions to produce stable, heterogeneous networks of actors with aligned interests".









×

Insert

오 5 근 뮵 永 둠 100% ▾ Normaltext ▾ Arial ▾ - 11 + B I U A 🖉 🖙 🗄 🖬 🛛

:=

1/2 Write a cover letter for a technical writer position at Google

Dear Hiring Manager,

- Refine

I am writing to express my interest in the Technical Writer position at Google. I have been working as a technical writer for the past five years, and I have a strong understanding of the principles of technical communication. I am also proficient in a variety of writing styles, including instructional, technical, and creative writing.

1...., ₹..., 1..., 1..., 2..., 3..., 4..., 5..., 6..., ₹..., 7...

In my previous role at Amazon, I was responsible for writing and editing user documentation for a variety of software products. I also worked closely with engineers and product managers to ensure that the documentation was accurate and easy to understand. I have a proven track record of success in developing clear and concise documentation that helps users understand complex technical concepts.

I am also passionate about the ethical implications of artificial intelligence (AI). I believe that technical communicators have a responsibility to ensure that AI systems are developed in a responsible manner. I have been working on a number of projects that explore the intersection of

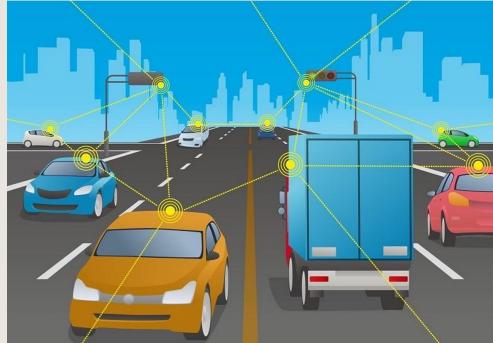
Rate this suggestion: 山 イリ This is a creative writing aid, and is not intended to be factual. <u>Learn more</u>



05 Equity and social justice

USER RESEARCH

Autonomous driving in hybrid environments



Impact of Human Behavior in a Mixed Traffic Environments

Input/Current model

- Traffic conditions
- User (drivers') preconceptions (Ranade)
- Existing surveys and human behavior analysis methods (Ranade)

Experimental system

- Simulated environment (CCI lab)
 - Hybrid simulator
- Driving performance
- Data
 - Eye-tracking quantitative data
 - Surveys (Ranade)
- Observed behavior (Ranade)

Outputs/Results

- Inputs for developers that incorporate human behavior findings
- Better simulations
 - Better algorithms
- Policy making
 - New regulations (Ranade)
 - Vocabulary and terminology to be included to establish trust among customers (Ranade)
- Factors contributing to Vulnerability: Socioeconomic status, age, disability, gender (*Ranade*)

CCI Northern Virginia Node (NoVa Node) Human Behavior and Cybersecurity grant

Uses of human augmentation for UI/UX testing

Are Mechanical Turk workers using AI to automate being human?

Researchers have found that nearly half of the workers on Amazon's Mechanical Turk platform are using artificial intelligence (AI) to complete tasks that were originally intended for humans. Mechanical Turk allows users to divide simple tasks into smaller sub-tasks that pay very little but can be completed quickly.

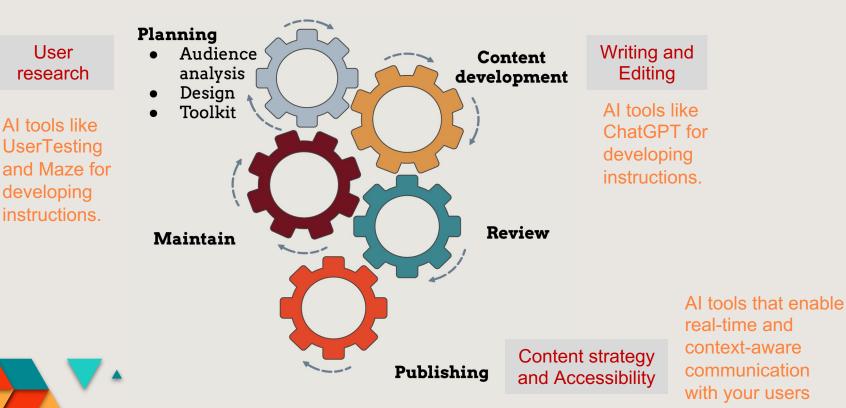
oecd.ai https://oecd.ai > incidents

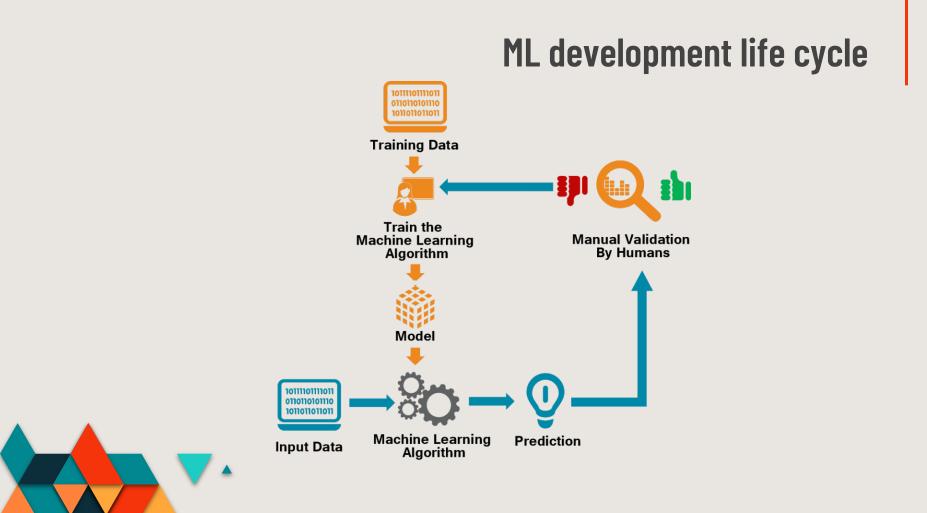
Mechanical Turk workers are using AI to automate being human - OECD.AI



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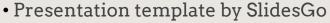
Documentation Development Life Cycle (DDLC)





Thanks!

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- Images via Google Search
- •Email me for detailed References