

“It’s not wrong, but I’m quite disappointed”: **Toward an Inclusive Algorithmic Experience for Content Creators with Disabilities**



Dasom Choi, Uichin Lee, Hwajung Hong

Content creators with disabilities



MY DAILY DISABLED ROUTINE 2021

69,837 views Mar 8, 2021

2.5K DISLIKE → SHARE ⌂ SAVE ...



Georgia Rankin

700K subscribers

SUBSCRIBE

Hey everyone, today's video is 'my daily disabled routine' where I show you the things that help me be independent and are things I can't live without. I hope you find it interesting.

221 Comments

☰ SORT BY



Best Crutches for Injury or Surgery

Josh Sundquist
22,637 views | Jan 16, 2020



What happened while riding a bus for the first time in 10 years as a wheelchair user

Wonderland Jeong
23,882 views | May 9, 2021



Top 5 More Accessible Smart Kitchen Appliances! (that I could find...)

Molly Burke
66,958 views | Feb 26, 2022



The prosthetic leg gave me an autumn walk.

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Algorithms →

Viewers



Creators with disabilities strategically interact with algorithms to spread their contents.



Non- or less- inclusive algorithm for people with disabilities



NLP models
(Hutchinson et al., 2019)



Social media algorithm
(BBC News, 2019)



Hiring tool
(Guo et al., 2020)



NLP models
(Hutchinson et al., 2019)



Social media algorithm
(BBC News, 2019)



Hiring tool
(Guo et al., 2020)



Negatively impact the algorithmic experiences of creators with disabilities

A photograph of a man with short brown hair, wearing a blue and white plaid shirt, sitting in a black wheelchair. He is facing a desk with a computer monitor displaying a video editing software interface. The screen shows two video frames side-by-side. A keyboard and a mouse are on the desk in front of him. To his left is a white shelf holding a silver pencil holder filled with colorful pencils and pens. In the background, there's a wooden shelving unit with small potted plants and a large flat-screen TV on the right. The overall lighting is warm.

To explore how inclusive the current
algorithmic experiences (AXs) for
creators with disabilities are.

Research Questions.

Q1

Unique goals of creators with disabilities & strategies to work with algorithms in achieving goals.

Q2

Perceived inclusiveness on the algorithms.

Q3

Challenges when interacting with algorithms.

Interviews with 8 YouTube creators with disabilities.



Interviews with 8 YouTube creators with disabilities.

P1	Vision impairments (Total blindness)
P2	Vision impairments (Low vision)
P3	Vision impairments (Low vision)
P4	Developmental disability
P5	Limbless disability (Use a prosthetic leg)
P6	Physical disability (Use a wheelchair)
P7	Physical disability (Use a wheelchair)
P8	Tourette's Syndrome

Findings.



Goals and Expectations towards Youtube AX (RQ1)

Perception toward the inclusiveness of algorithms (RQ2)

Challenges while interacting with algorithms (RQ3)

Goals and Expectations towards YouTube AX

(RQ1)



I want to present diverse representations of disability for the public.



Correct misconceptions about disabilities by showing **active or independent** images of people with disabilities.



P2's Video

“How do people with vision impairments learn to dance?”

P5's Video

“2nd prosthetic socket replacement |
Running with prosthetic Leg”

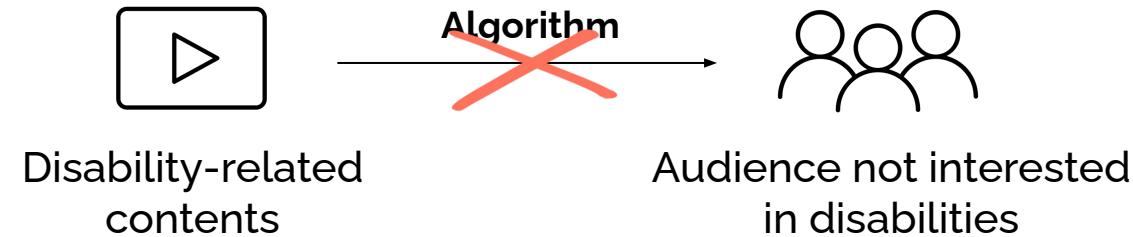


Perception toward the inclusiveness of algorithms

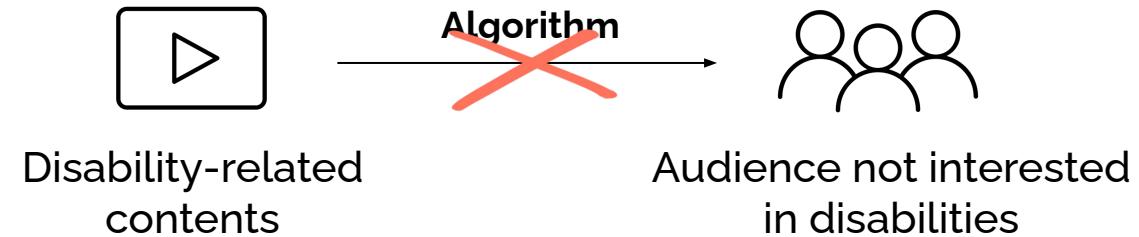
(RQ2)



I think... distribution algorithm does not support the unique goals of creators with disabilities.



It's not wrong, but I'm quite disappointed. *P₂*



Challenges while interacting with algorithms

(RQ3)



Did the algorithm filter my videos because it is about disability?

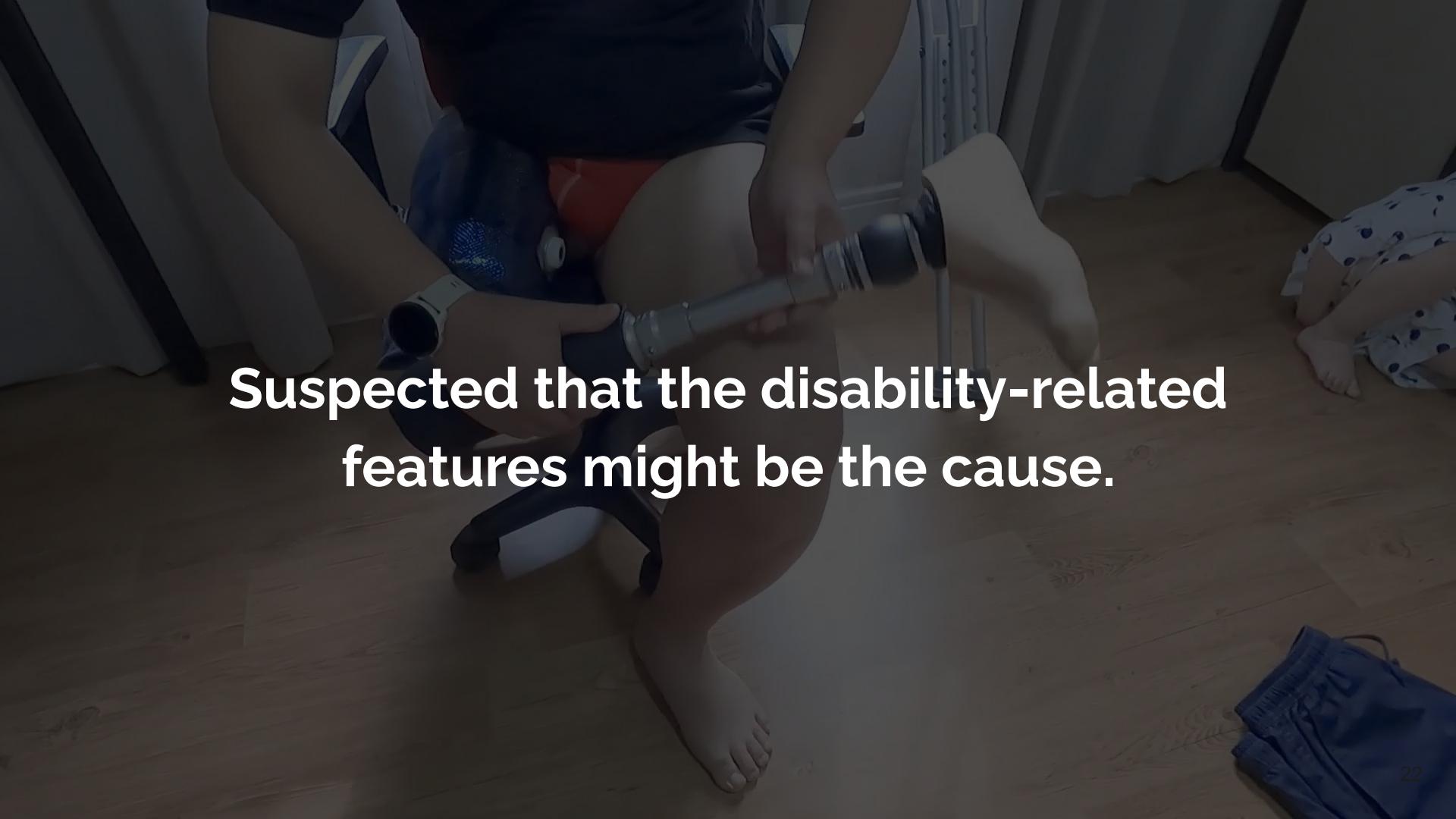


Content moderation algorithms
filtered my disability-related video.

P5's Video

Thumbnail containing his injured body
automatically replace with another image.



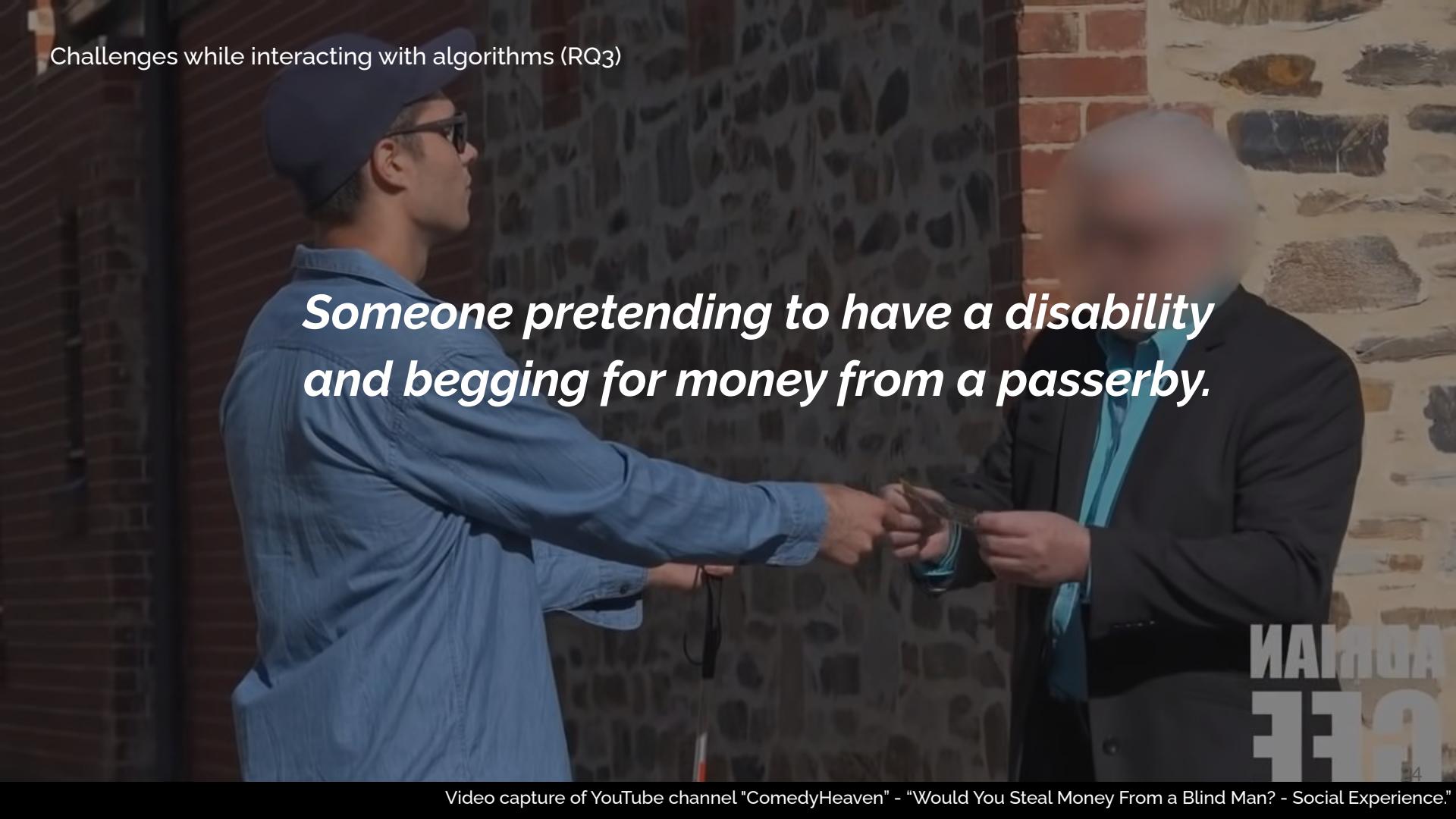
A photograph of a young child with a prosthetic leg sitting on a light-colored wooden floor. The child is wearing a blue t-shirt, red shorts, and a blue superhero mask. A white smartwatch is visible on their left wrist. In the background, there's a white shelving unit and another person's legs in blue jeans.

**Suspected that the disability-related
features might be the cause.**

I distorted my disability identities to benefit from algorithms.



*"There are many **provocative videos about disabilities** on YouTube which present us as pitiable people." (P1)*

A video still showing a man in a blue shirt and cap handing a bill to a blindfolded man in a suit. The background is a brick wall.

*Someone pretending to have a disability
and begging for money from a passerby.*

ИАИОД
ЕЕД

*Someone pretending to have a disability
and begging for money from a passerby.*



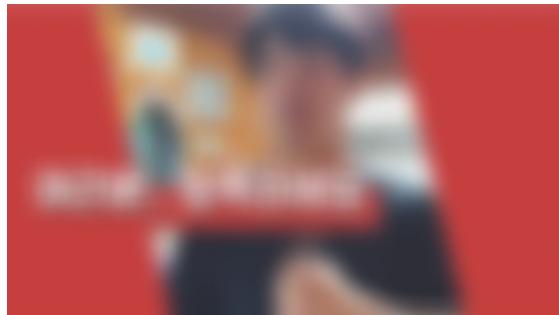
Got high views

I distorted my disability identities to benefit from algorithms.



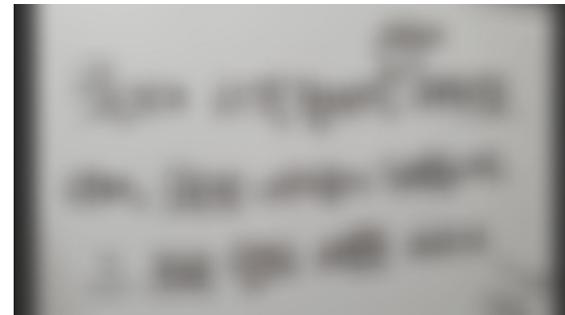
Some participants **tempted to create provocative videos** by benchmarking the topic of highly viewed videos.

I distorted my disability identities to benefit from algorithms.



Tic Disorder, Ready to Die (P8)

8,668 views | Jan 26, 2021



Blind YouTuber in his 30s, he's putting everything down now. (P3)

3,848 views. | Nov 14, 2020

Discussion.

Is this an inclusive algorithmic experience?



Algorithm does not discriminate against disability.

However, unique goals and needs of them are
not reflected in the algorithm.

Is this an inclusive algorithmic experience?



Inclusive AI system should consider
users' contexts, needs, and expectations.
(Fjeld et al., 2020)

Is this an inclusive algorithmic experience?

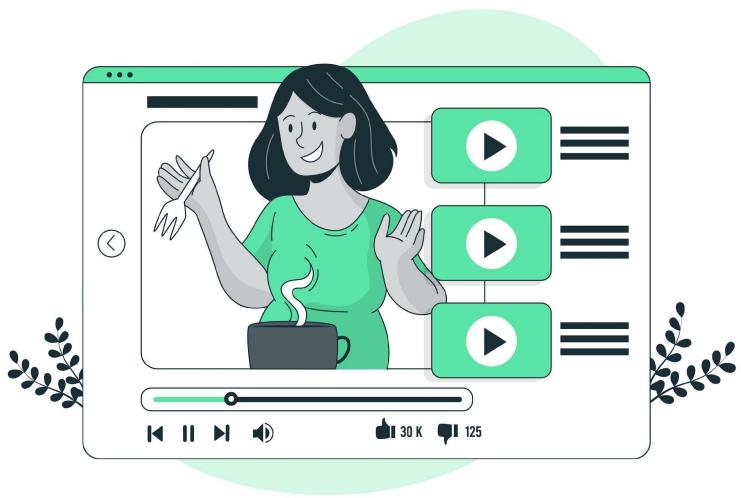


Less inclusive algorithmic experience
that does not consider the context and
value of creators with disabilities.

Design Implications.

Aligning the algorithm to the creator's value.

Space to write statements about creator's goals and potential audiences.



Who are your potential audiences?

Enter text.



Amplifying the invisible voice of audiences to creators.

Channels through which audiences can express their opinions about content's quality and worth.



Which parts of the video elicited your positive or negative reactions?

Enter text.

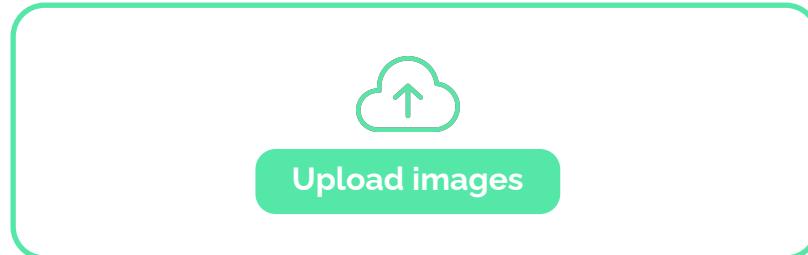


Collecting disability-specific data from users.

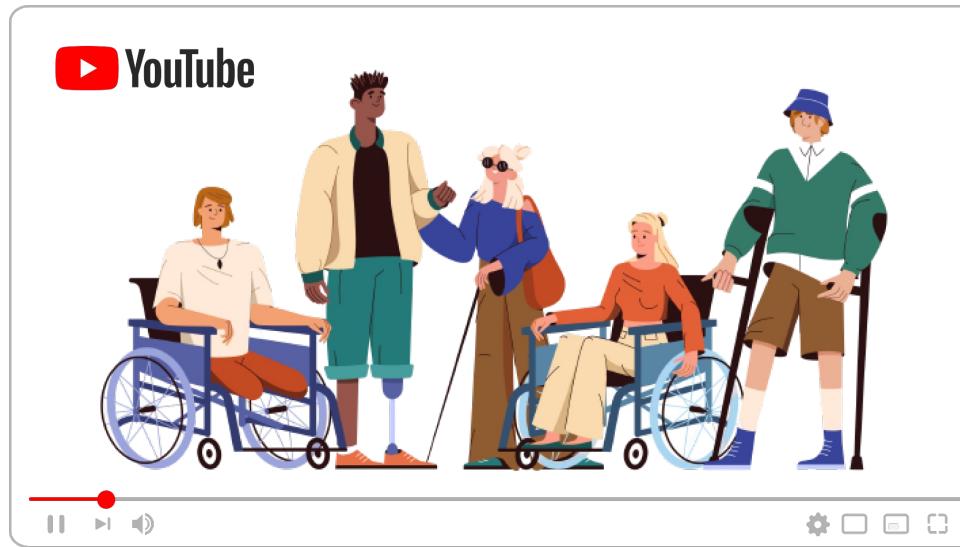
To prevent the algorithms from misjudging the unique characteristics of people with disabilities.



Upload images of the problem and write the explanation.



Empirical findings and implications on how algorithmic experiences can be inclusive for creators with disabilities.



Thank you!

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