



# Positive Online Experience

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1. What is a “Positive Online Experience”?
2. How do we experience online?
3. Challenges & Opportunities

# Invoking Joy



“Joy, Riley wants you”  
– Sadness

Prioritizing positivity

“Can seeking happiness make people happy? Paradoxical effects of valuing happiness”. 2012

# Encouragement

A screenshot from the Pixar movie "Inside Out". It shows the character Anger, a small red cube with a determined expression, standing in a hallway. He is wearing a white shirt, brown pants, and a striped tie. His arms are crossed over his chest. The background is dark purple.

“Joy, you’ve made a lot of mistakes, and you’ll make a whole lot more in the future. But if you let that stop you, we might as well lie down and give up.” — Anger

Motivation as a precursor to many positive behaviors

“Can seeking happiness make people happy? Paradoxical effects of valuing happiness”. 2012  
“Feeling good, doing good, and getting ahead: A meta-analytic investigation of the outcomes of prosocial motivation at work” 2022

# Expressivity



“We are Suppressed Emotions!”  
— Fear

Variety in emotions is the spice of life

“Emodiversity and the Emotional Ecosystem”, Journal of Emotional Psychology. 2014.

# Expressivity



“We should lock the door and scream  
that cursed word we know”  
— Anger

When Anger makes you happy /  
Sadness is a vital part of happiness

“Should people pursue feelings that feel good or feelings that do good? Emotional preferences and well being”, Emotion. 2012.

“A Dark Side of Happiness, How, When and Why Happiness is Not Always Good”. 2011.

# Friendship



“Friendship Island is pretty great too.” — Joy

People with 5 or more friends are 60% happier – CNBC

“Plays well with Others: The Surprising Science behind Why Everything you know about Relationship Is (mostly) wrong”. 2022



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lynnnette @quarby · Jun 13  
Preprint of my favoritest work to date! "Exploring Cognitive Bias Triggers in COVID-19 Misinformation Tweets: A Bot vs. Human Perspective" combines computational methods, data science, and social psychology!  
[arxiv.org/abs/2406.07293](https://arxiv.org/abs/2406.07293) (1/3)

arXiv.org  
Exploring Cognitive Bias Triggers in COVID-19 Misinfo  
During the COVID-19 pandemic, the proliferation of misinformation on social media has been rapidly ...

1 8 20 1.8K

lynnnette @quarby · Jun 13  
1. We compiled a dataset with COVID-19 vaccine-related misinfo, annotated by bots/humans, and by eight cognitive biases.  
2. We develop a computational method to identify these triggers of cognitive biases.  
3. We analyze the effects of bias triggers on post engagement (2/3)

1 1 102

# Text

# Behavioural



littlebabypenguin Follow

312 posts 3,621 followers 1,036 following

Surviving CS PhD at CMU w/ Snow & Elio  
Pittsburgh 🇺🇸  
Doodles: [@babypenguindoodles](#)  
Pics: [@penguinshootphotos](#)  
★ DM for... more  
[quarby.github.io](#)

Pittsburgh 2 PhD Heart trans... MT NY PA Pittsburgh

POSTS REELS TAGGED

# Image

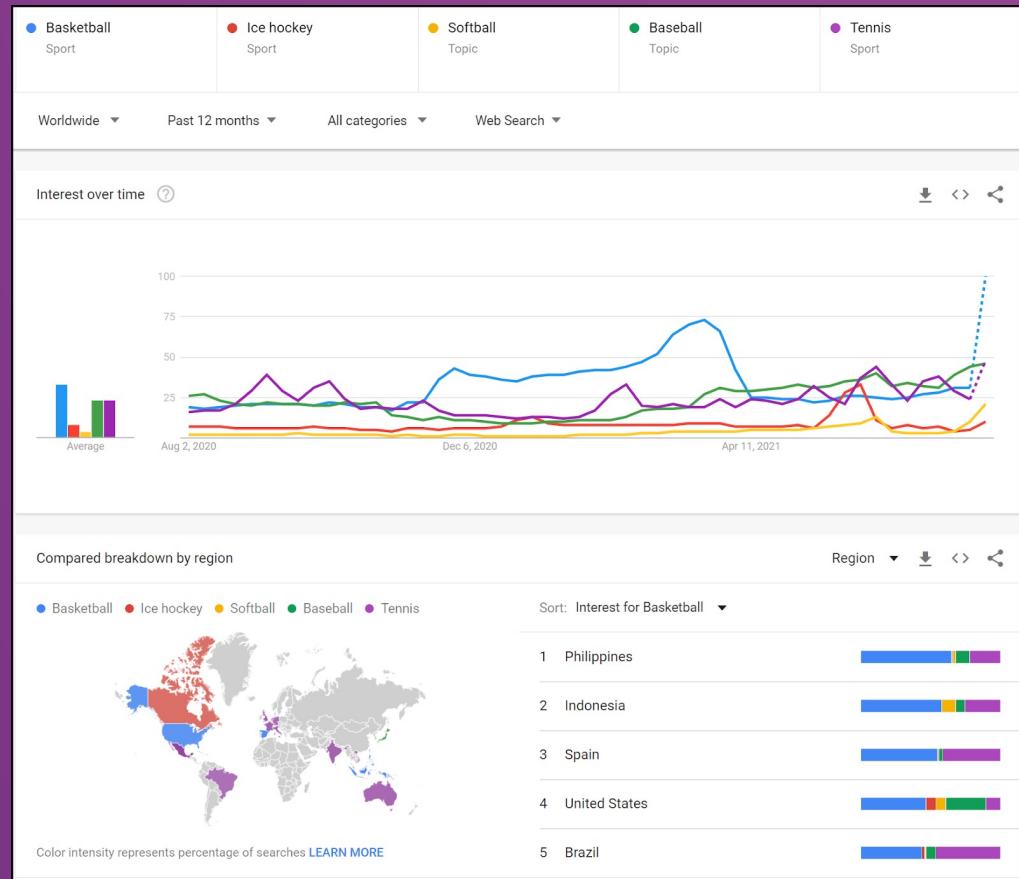
# Audio/Video





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# Real Time



Emotion detection and response

Toxicity detection algorithm

Algorithmically craft interaction strategies

Multi-modal challenges

# Compute Resources

Name	Medium	Cost	Detects	Games that use it
WebPurity	video	0.15 usd/min	nudity, sexually suggestive, hate, violence, offensive gesture and language, drug, blank/broken	multi modal support
	picture	0.02usd/image	category based search provided at 0.0015 usd /category	
ToxMod	audio	0.15usd/hour 2k usd one-time onboarding, most expensive plan is cheapest at 0.10usd per hour		riot games, recroom
RapidAPI	text	15usd/mth	toxic language in text	

Player statistics for League of Legends  
(<https://activeplayer.io/league-of-legends/>)  
Average number of players = 1 025 517  
Voice moderation cost = 0.10 USD/ hour  
Avg voice mod per hour = 102 551.70 USD/hour  
Avg voice mod per day = 2 461 240.80 USD/day  
Avg voice mod per year = 898 352 892 USD/year

Riot games revenue, 2022 = 1.5b

Commercial API are expensive

Locally run tools compute heavy

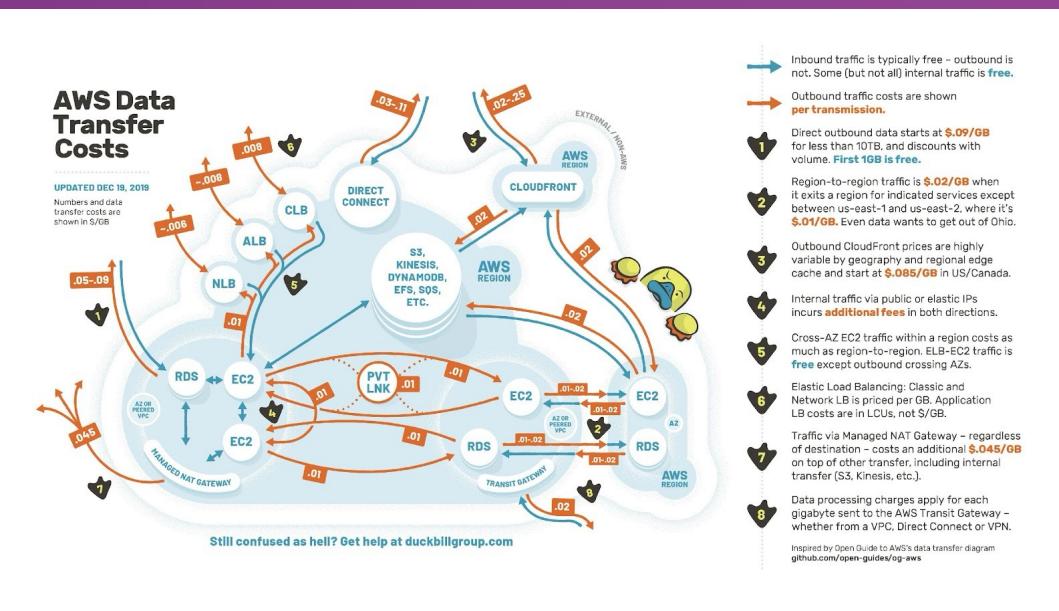
Locally run checks can be by-passed

# Network Utilization

Offloading to cloud consumes bandwidth

Does not scale for complex solutions

What is the minimum data packet to upload?



# Privacy & Legality



How to store data for analysis?

What if data stored are illegal?

What about badly labeled data?

Start using Gen Z language	
Instead of:	Say:
That really sucks	Oof
Wow, that's shitty	Yikes
I can relate to that	Mood
I can't believe something That shitty can happen	Big Oof
That's incredibly horrible I'm really sorry that happened	Shit man
I'm sorry for your loss	F
I don't think so	This ain't it chief
Wait a min	Hol up
Let's do this	Let's get this bread
It happens	It be like that sometimes
All of the above	Yeet

# Evolving Trends

Models trained yesterday are outdated today

Lingo of emotions/ emojis/ gifs evolves

Uncertainty of tools



A screenshot of a TechCrunch news article. The header features the TechCrunch logo with 'AI' written above it, followed by the title 'Roblox acquires voice moderation startup Speechly'. Below the title, there are navigation links for 'Login', 'Search Q', and 'Startups'. At the bottom, it shows the author 'Sarah Perez' and the date '7:25 AM PDT • September 20, 2023', along with a 'Comment' section icon.

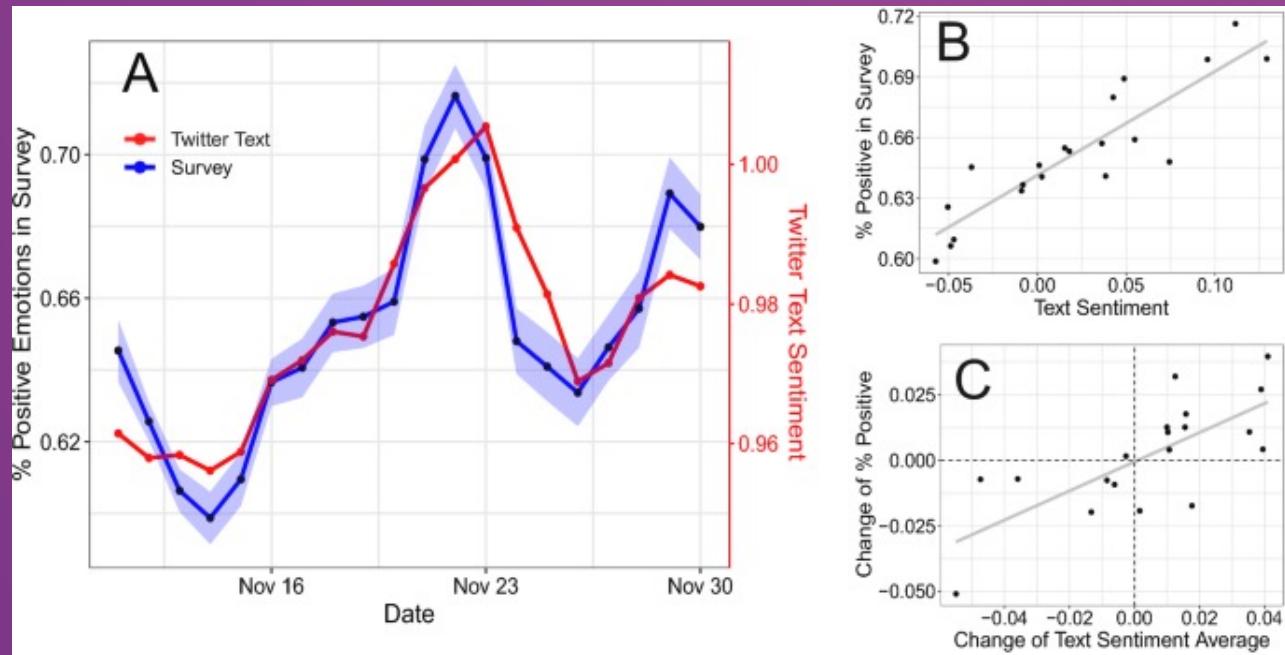


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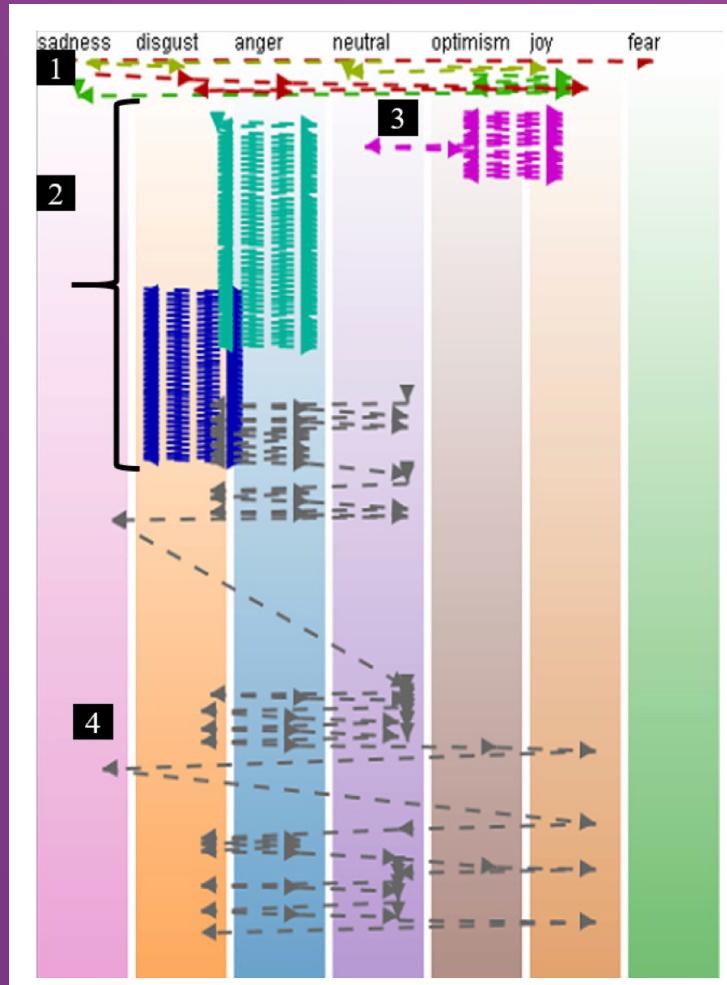
Emotions in Twitter text  
mimics surveyed emotions

What people post = What  
they feel

We can use social media as  
a proxy



# Emotion Dynamics



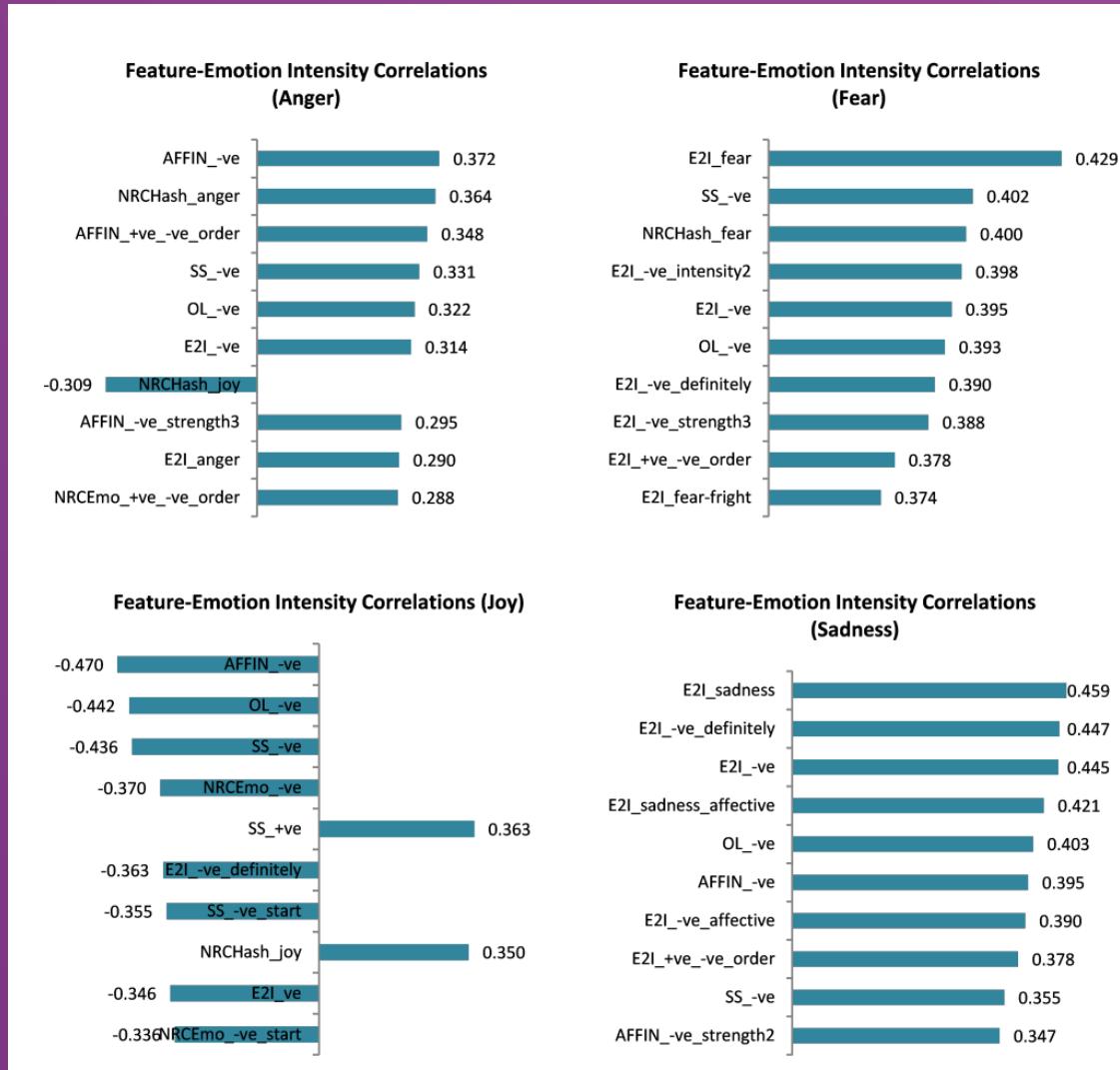
During crisis, people fluctuate within three emotional patterns:

- (1) optimism/ joy
- (2) disgust / anger
- (3) several emotions

People do change emotional states

Can we push people towards happy states?

# Emotion Distribution



CrystalFeel, 2018

Analyzing Emotional  
Intensity in Text

Mainly analyzed Anger,  
Fear, Sadness

Can we scale it up?  
Can we analyze Joy?

# Emotion Distribution

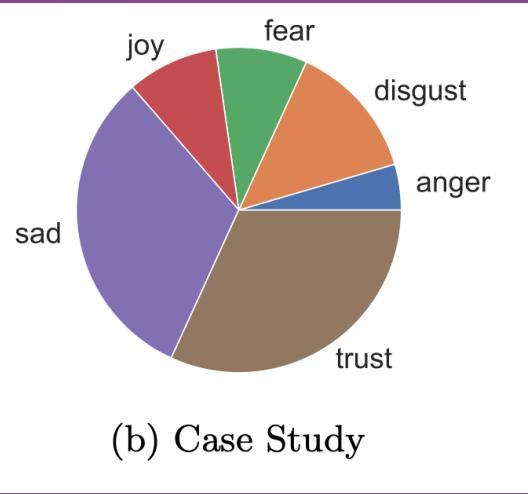
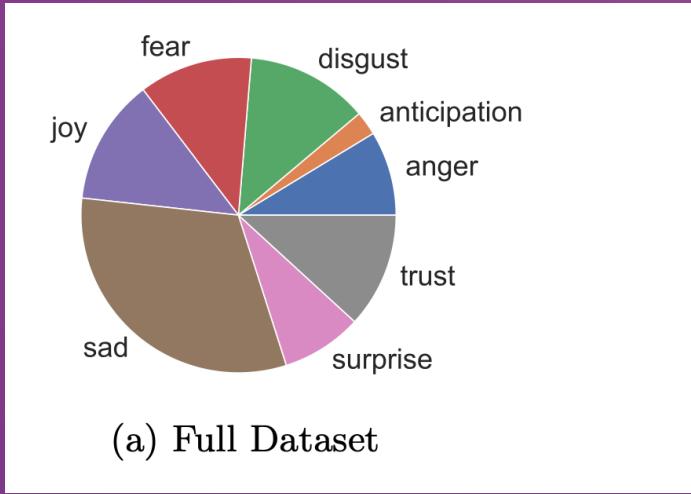


HeartBeat ,2019

Emphasis on negative emotions

What about positives?  
What can we learn about positivity in crisis?

# Emotion Mimicking



Bots can mimic human negative emotions

Can we use bots to spread positivity?

# Emotion Generation



Love's Resilience in Israel ❤️  
In the echoes of uncertainty,  
love takes flight like doves  
soaring against the storm. Let  
these graceful messengers  
remind us that even in times of  
war, the wings of hope and unity  
can carry us to a brighter  
tomorrow. #LoveForIsrael  
#HopeInConflict



Peace Prevails in the Midst of  
Strife 🌈❤️  
In the heart of conflict, let's  
envision a shared future of  
harmony and understanding.  
Our thoughts and hopes are  
with the people of Israel and  
Palestine for a peaceful  
resolution. 🌎❤️ #PrayForPeace  
#Israel #Palestine



A Glimpse of Palestinian Resilience  
🇵🇸  
Captured a moment of strength and  
beauty amidst challenging times in  
Palestine. Let's stand together,  
appreciate the vibrant culture, and  
envision a future of peace and  
prosperity. 🌈❤️  
#PalestinianResilience  
#UnityInDiversity 🌎



Love Transcends in Israel ✨❤️  
Amidst the trials of war, the heart of  
Israel beats with resilience and  
unity. Sending love, strength, and  
hope for a peaceful tomorrow. ❤️  
#LoveForIsrael #UnityInAdversity  
✨✨

## Love-Hate Dataset, 2024

### Images & captions generated with GPT4-V

### Can we generate images that evoke emotions?

# Emotions do not work alone



“They came to help... because of  
Sadness”  
— Joy

# As a community...



What are the pathways to positivity online?

What topics invoke positivity?

How do we provide a positive experience?

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[quarby.github.io](https://quarby.github.io)



Emotions in Image model: “Bot-Based Emotion Behavior Differences in Images during the Kashmir Black Day Event”

Emotion dynamics & Predictions: “I miss you babe: Analyzing Emotion Dynamics during COVID-19 Pandemic”

GPT4-V and emotions: Love-Hate Dataset: “A Multi-Modal Multi-Platform Dataset Depicting Emotions in the 2023 Israel-Hamas War”

CrystalFeel: Crystalfeel at semeval-2018 task 1: “Understanding and detecting emotion intensity using affective lexicons”

# Tools & Datasets

Emotions in Image model: “Bot-Based Emotion Behavior Differences in Images during the Kashmir Black Day Event”

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