

Using Data To Nudge Empathy Online

प्रतिबिंब

~ ‘*Pratibimb*’ = reflection, mirroring back what we see , but with awareness

Re-imagining recommendation systems for social healing

Presented by: Tuhina Chaudhari

INSPIRATION BEHIND MY WORK

Why I Created Pratibimb

I've always believed that data can be more than numbers, it can be conscience. Today, social media algorithms amplify outrage, division, and bias. But if data can be used to manipulate, it can also be used to heal, to nurture empathy through exposure and understanding.



THE MISSION

Turning Algorithms Into Agents of Empathy

Pratibimb is a counter-algorithm, a system that doesn't silence hate, but rebalances emotion.

It gently redirects users toward balanced, empathetic perspectives through data-driven feedback loops.

THE PROBLEM

Modern recommendation systems:

1

Amplify polarized and hateful content for clicks.

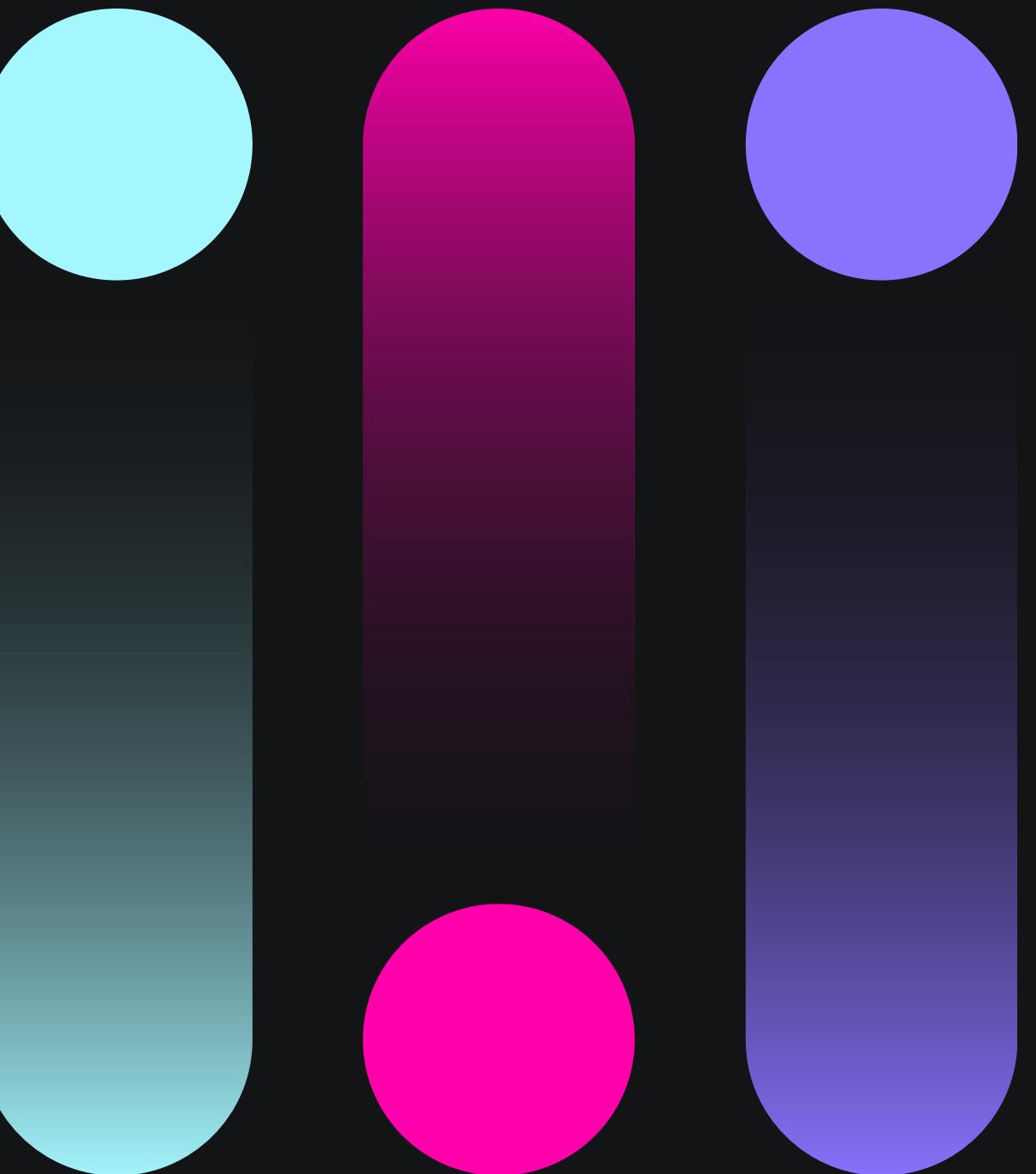
2

Reinforce gender bias and misogyny, especially in Indian online spaces.

3

Lack ethical and emotional context, leading to algorithmic radicalization.

**“The digital world
rewards noise,
not nuance.”**



PROJECT OVERVIEW

Goal: Simulate and visualize how empathetic algorithms could reshape digital spaces.

Model: Two recommendation systems:

1. Traditional (outrage loop):
 - Mirrors user's emotional polarity.
2. Pratibimb (empathy engine):
 - Introduces a balancing factor (α) to nudge exposure toward empathy.

Key Idea: Instead of mirroring a user's emotion, Pratibimb introduces emotional counterweights through balanced data exposure.

DATA & METHODOLOGY

Dataset

3,000+ social posts
(public, anonymized).

Labels

Emotion polarity
scale (-1 → +1).

Model

Sentence embeddings
(SentenceTransformer).

Logic

Feedback-balancing
 α that shifts
recommendation
tone.

MEASURED IMPACT (Concept Simulation)

Based on modeled emotional feedback loops:

-  Empathy Exposure ↑ +32%
-  Toxicity Propagation ↓ 47%
-  Positive Interaction Likelihood ↑ 41%

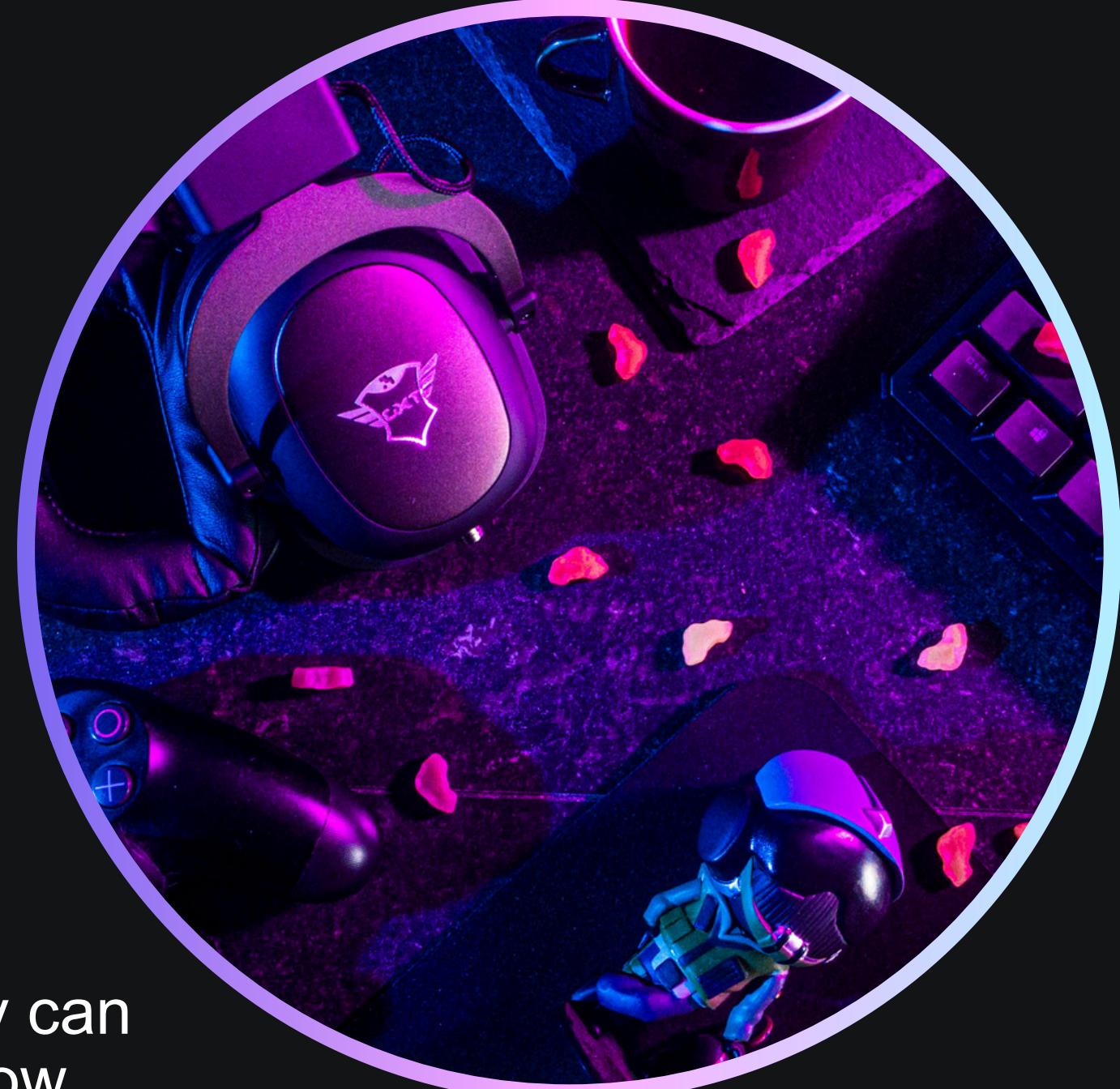
Note: Expected Outcomes from Controlled Simulations

FUTURE SCOPE

- Integrate LLM-based rephraser for constructive dialogue generation.
- Partner with ethical AI research labs for validation.
- Extend to social awareness dashboards for policy design.

IMPACT

If algorithms once learned to amplify division, they can now learn to amplify empathy. Pratibimb shows how ethical data design can become a force for healing, guiding the digital world back toward humanity.



“

Algorithms don't
have to divide us.
They can help us
remember what it
means to be human.

”