

Face Mis-ID: An interactive pedagogical tool demonstrating disparate accuracy rates in facial recognition

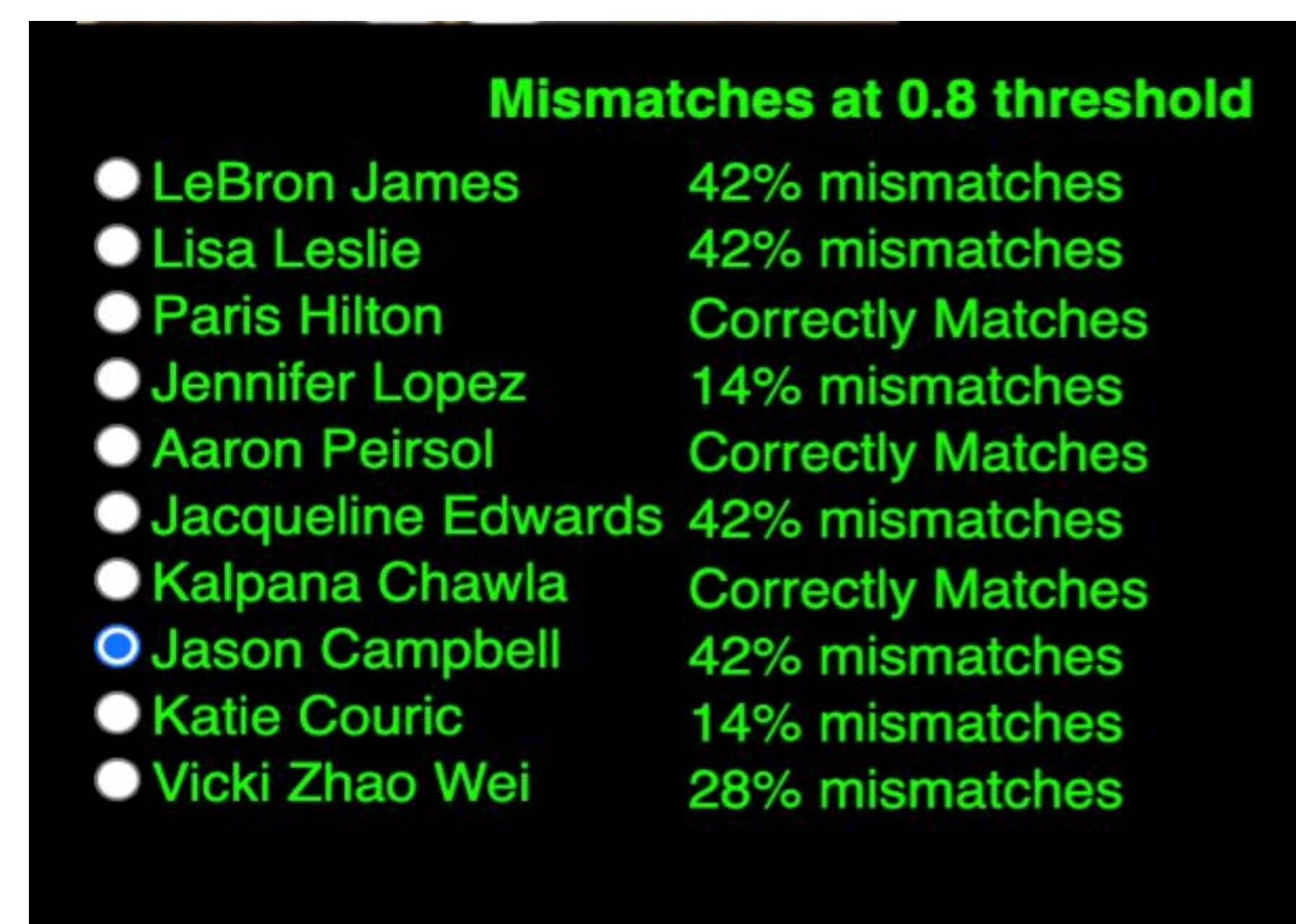
Daniella Raz, Corinne Bintz, Vivian Guetler, Dharma Dailey, Aaron Tam, Michael Katell, Bernease Herman, P. M. Krafft, and Meg Young

INTRODUCTION

- In contrast to the broad awareness within academic communities of Buolamwini and Gebru et al.'s (2018) findings of high error rate for dark skinned women in facial recognition, and concerns about the social justice implications of biometric identification more broadly, recent work by the Pew Center.
- As an increasing share of social systems rely on machine learning, increasing public awareness of these systems' risks and failures can temper such high expectations about their use and encourage the public to raise critical questions.
- We partnered with community organizations doing anti-surveillance work to develop and refine this project.

DESIGN PROCESS

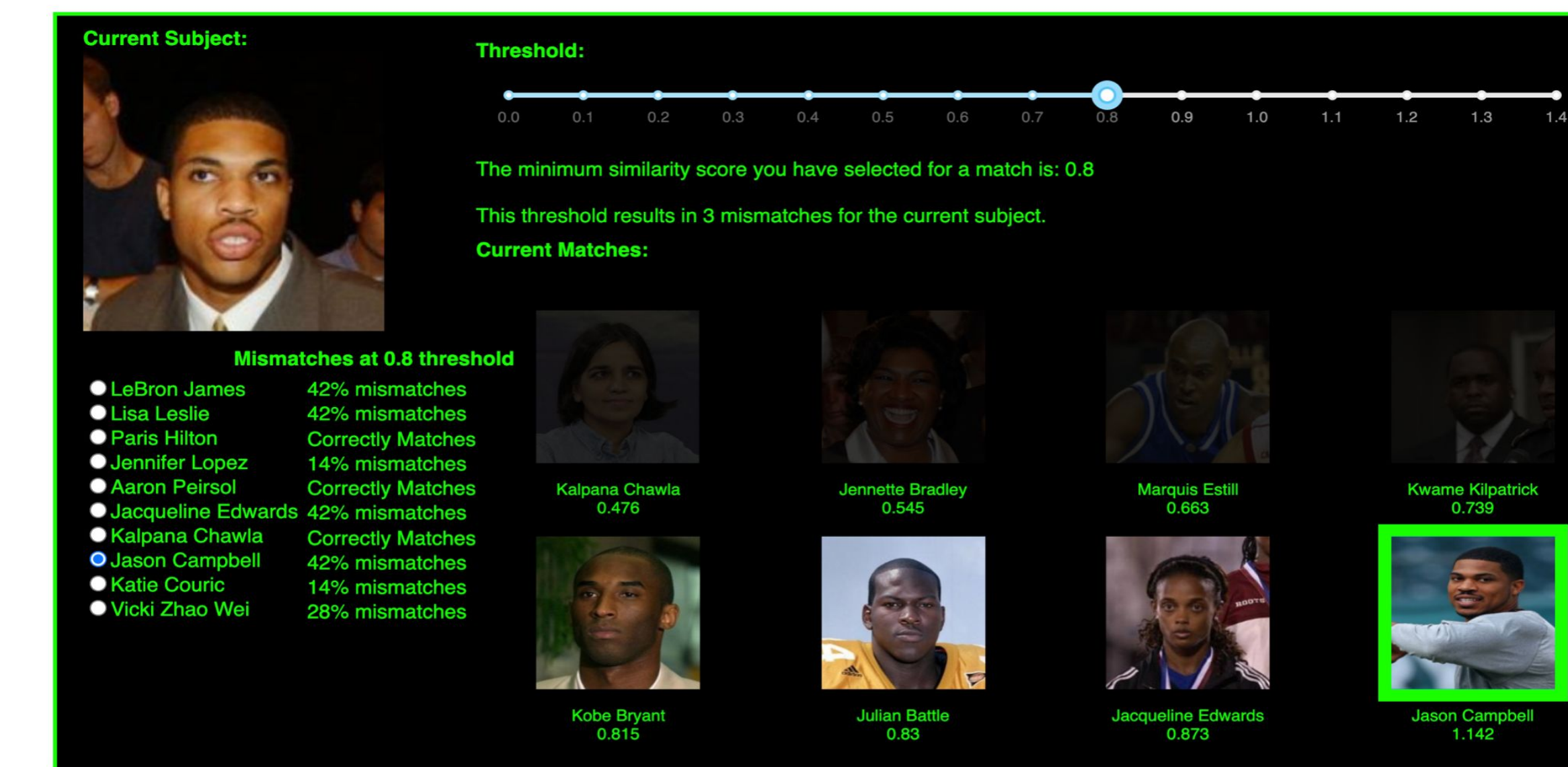
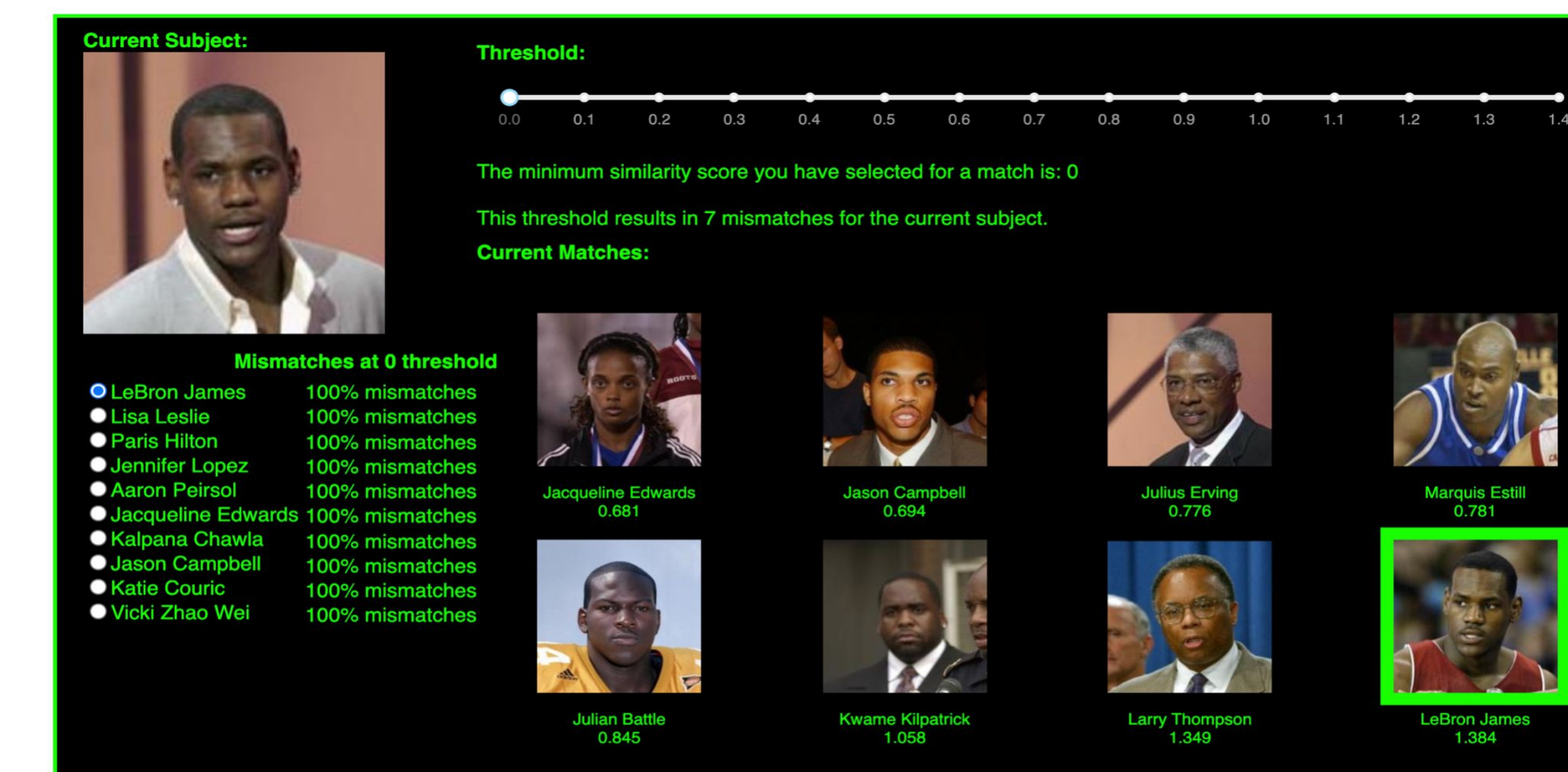
- We set out to make a pedagogical demo of Buolamwini and Gebru's (2018) findings.
- We used an open-source facial recognition algorithm called OpenFace for identification on a 72-image dataset curated for teaching how classification error incidence varies with respect to race and gender.
- We piloted it with three panels of community organizers focusing on immigration, formerly incarcerated people, and racial justice activism.



This closeup of the Face Mis-ID demo highlights how for any given match threshold, the incidence of misidentification varies across individuals.

We created an interactive demo to illustrate the racializing and gendered dimensions of misidentification in algorithmic systems.

We call on the community to produce pedagogical tools to support non-specialist understanding of algorithmic systems.



PRESENTING THE FACE MIS-ID DEMO

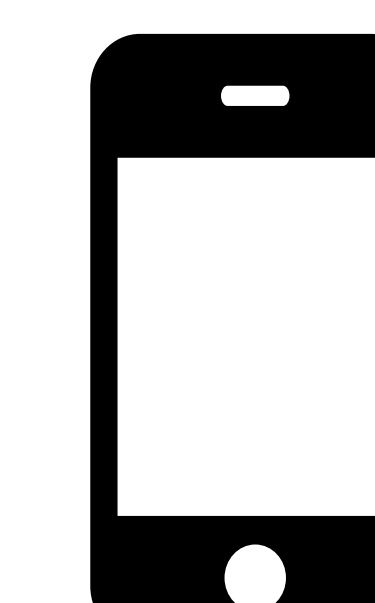
- Our interactive demo displays facial recognition performance across individuals to illustrate how systems fail with respect to race and gender.
- Our design highlights how match threshold determines system performance and thus the powerful role system operators play in misidentification.
- We chose celebrity images to allow users to recognize misidentification more readily, and to underscore how if misidentification is possible with widely-photographed individuals, it is even more likely on everyday people.

A CALL FOR MORE EDUCATIONAL RESOURCES

- We drew inspiration from other accessible and interactive resources for this work.
- However, some non-specialist resources (such as the How Normal Am I demo) reify the perception that AI assessments are accurate.
- We call on the community to create educational resources illustrating the risks and failures of algorithmic systems in order to incite further interrogation of AI as it becomes more widely used.



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