



Egaleco

Advancing Fairness in Machine Learning

Product & Policy Team

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The Problem, Our Motivation

COMPUTING

Racial Bias Found in a Major Health Care Risk Algorithm

Black patients lose out on critical care when systems equate health needs with costs

A STAT INVESTIGATION

Denied by AI: How Medicare Advantage plans use algorithms to cut off care for seniors in need



By [Casey Ross](#) and [Bob Herman](#) March 13, 2023

Forbes

FORBES > LEADERSHIP > DIVERSITY, EQUITY & INCLUSION

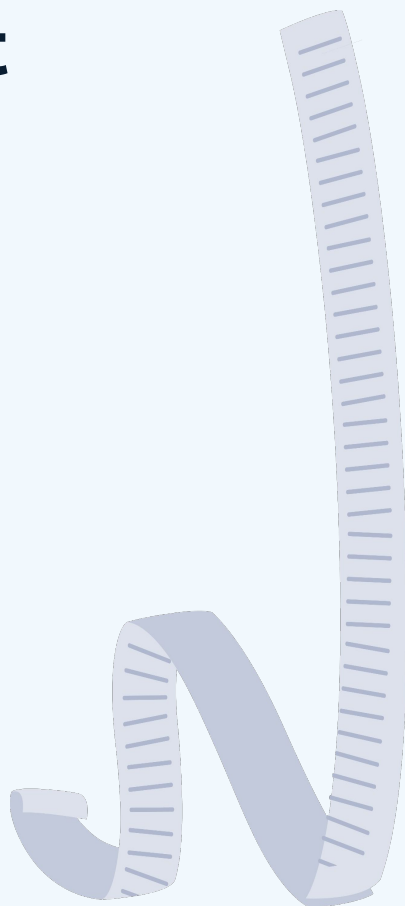
AI Bias Could Put Women's Lives At Risk - A Challenge For Regulators

AI in Healthcare can create disparate impacts

How will ***YOU*** build algorithms
that don't perpetuate or amplify
historical biases?

Fairness Audit

- Several dozen fairness metrics
- Impossible to satisfy them all
- But before all that... how do we even define fairness?



Metric #1,284.

Okay, the True Positives divided by the False Positives, multiplied by the total number of Negative Predictions, plus the temperature of the room, multiplied by the negative exponential of the number of words in this sentence, should be the same for all sensitive groups.

What are we measuring again?

Fairness.

Right.






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Inspired by the needs and habits of ML practitioners
and fairness experts.



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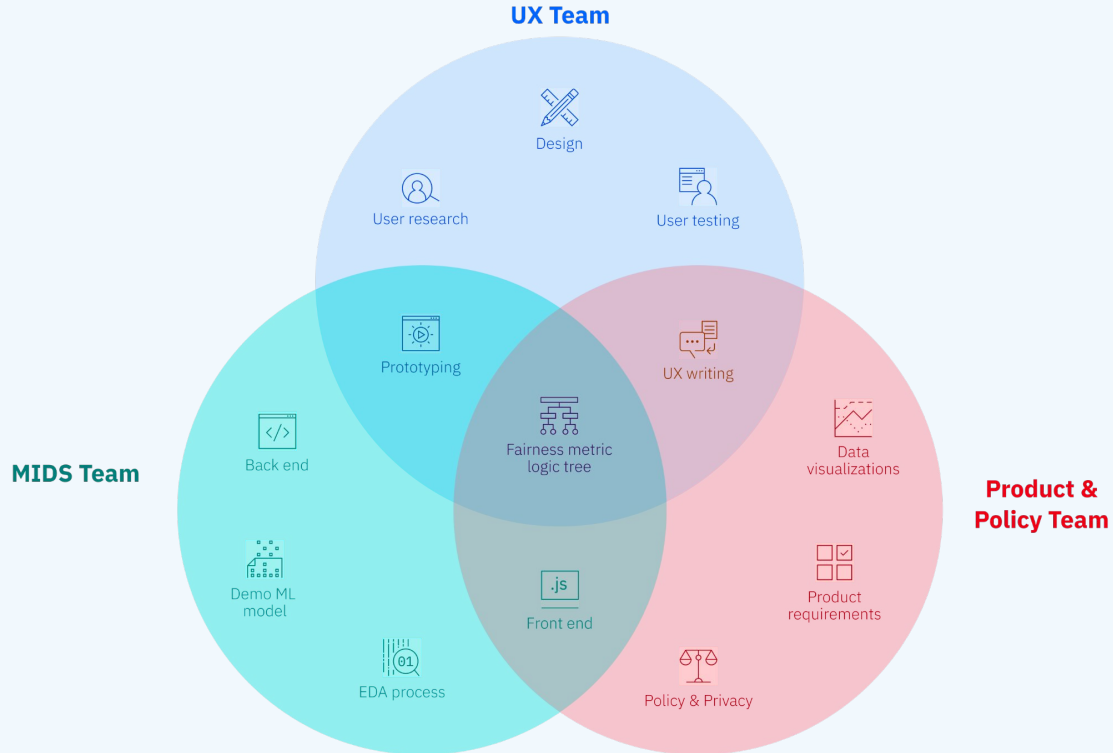


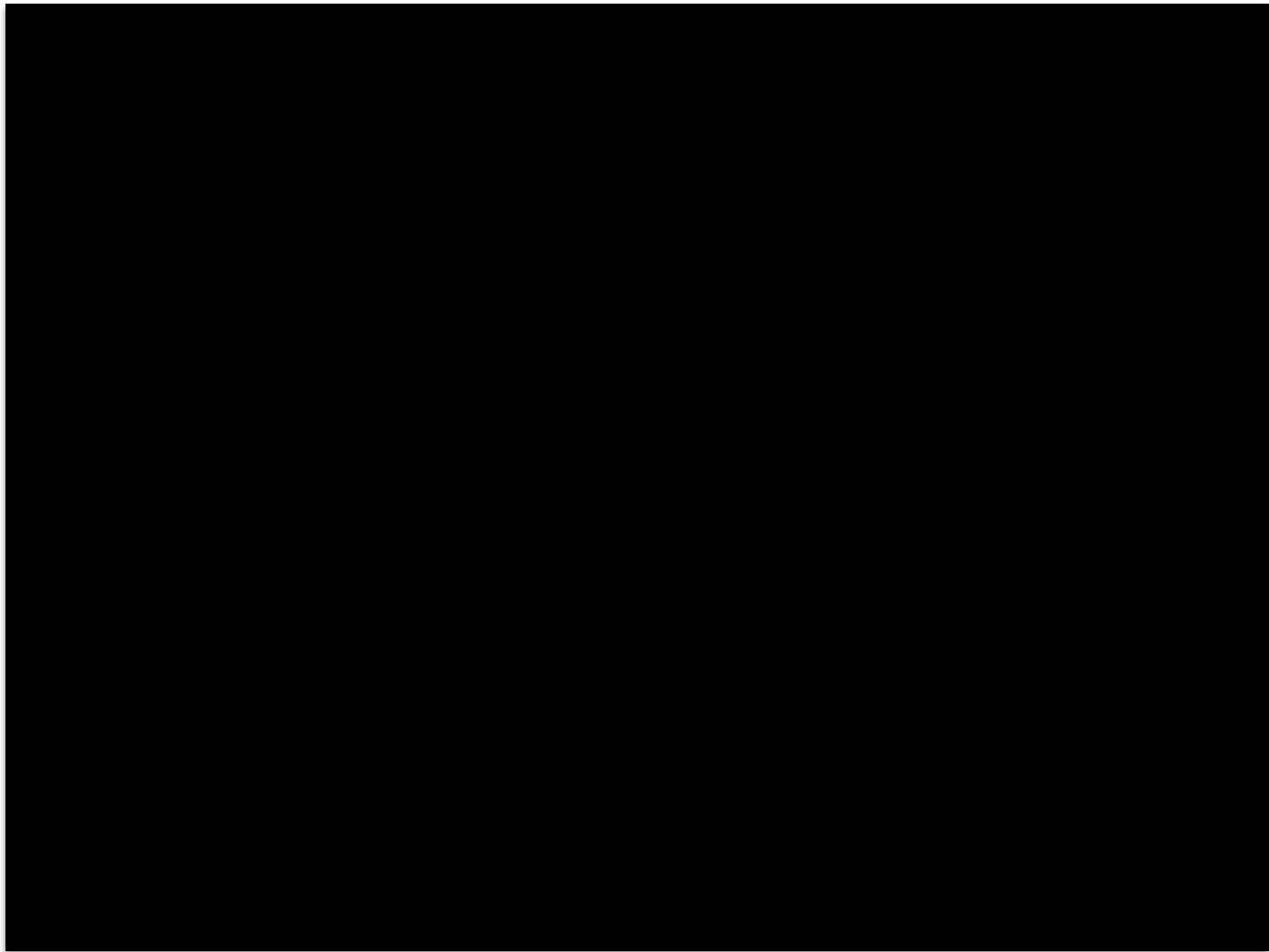
**Contextualize
Fairness**

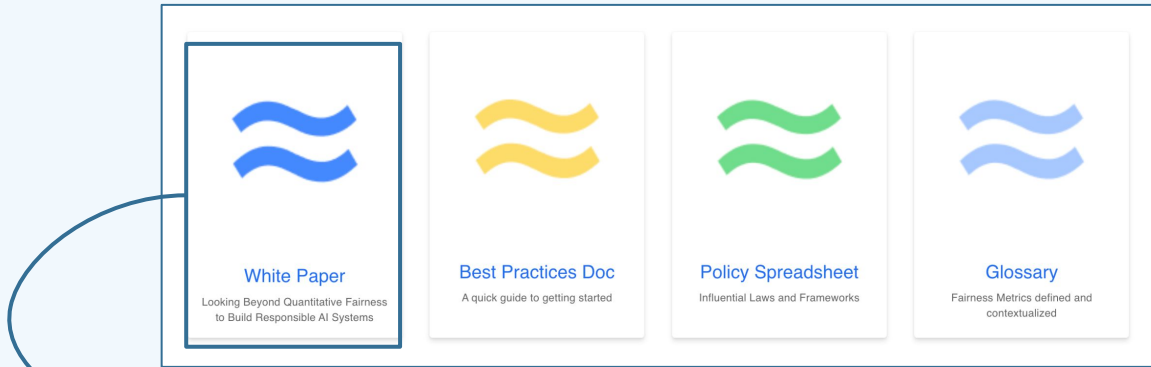
**Visualize
disparities and
generate a
Fairness Report**

**Resources for Fair
ML**

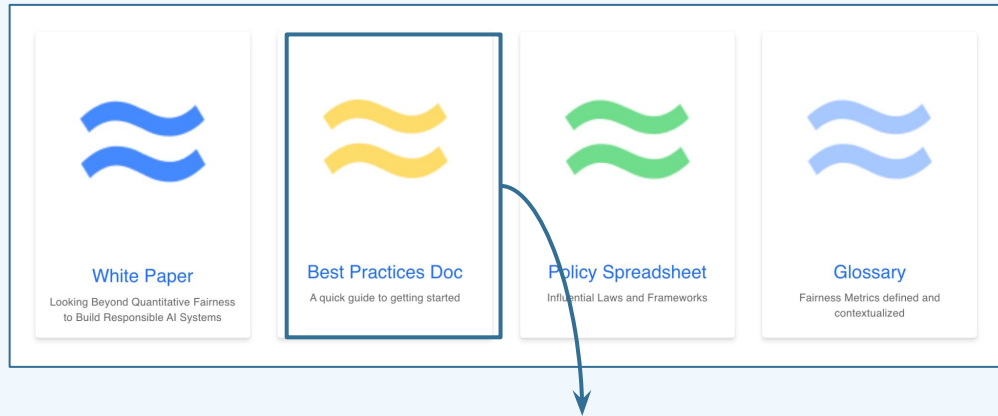
Interdisciplinary Collaboration







- **Fairness goes beyond math**
- Tooling is not a panacea
- **Legal fairness: anti-discrimination approach**
 - Compliance ≠ holistic fairness
 - Procedural fairness can obscure harms of “neutral” systems
- **Social fairness: considers context and impact**
 - Promotes system **transparency and explainability**
 - Problematizes rigid classification



- **Practitioners need support operationalizing fairness**
- Resources to **distribute ownership**
- common vocabulary & **existing resources**
- Start projects with “**responsibility sprints**”
- **Interdisciplinary, interative approach**

Conclusion

Egaleco, a novel approach to:

- Context specific guidance for Healthcare
- A new system of ranking fairness metrics
- Policy and Ethics resources



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Thank you

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