
AWS
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Using culturally sensitive AI to advance health equity

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Examples of Disparities in Health

Black women have a 4% lower incidence rate of breast cancer than white women but are four times more likely to die of the disease

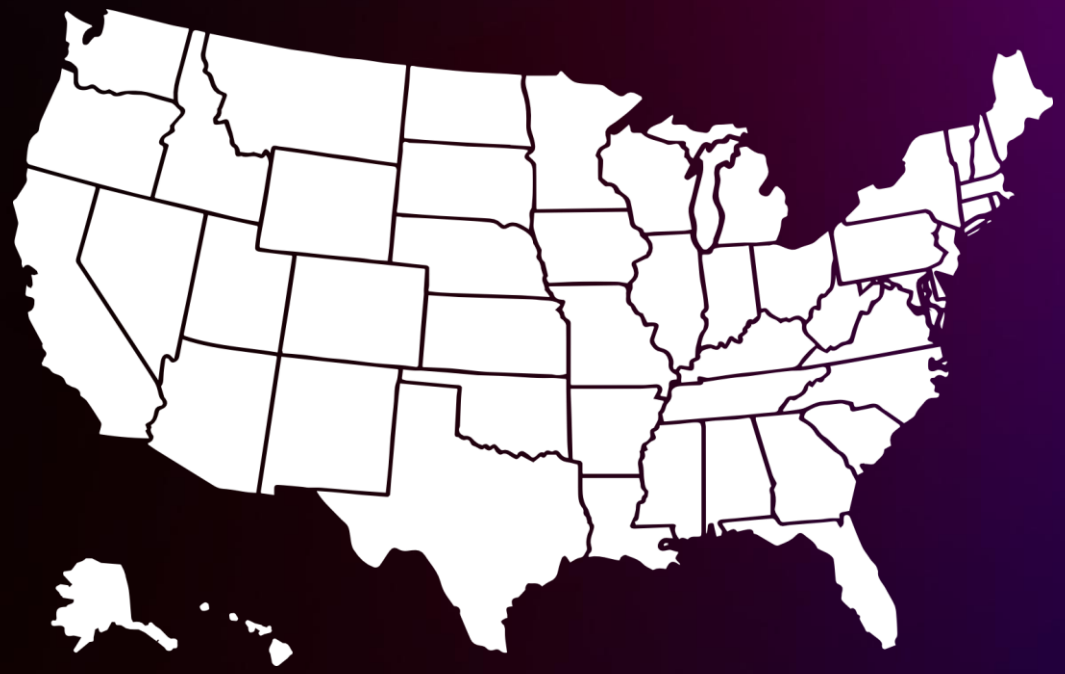


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Examples of Disparities in Health



1 oncologist to 3000 cancer patients



1 oncologist to 250 cancer patients

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Diversity Equity and Inclusion in Clinical Trials

In the past 20 years of cancer medication approval by the FDA, less than 3% of the clinical trial participants were African American



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Kaposi Sarcoma in Black vs. Caucasian Skin





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One Size Does Not Fit All

Median age of diagnosis for colorectal cancer in the US is 68.5 years old

Median age of diagnosis for colorectal cancer in Nigeria is 50 years old

Guideline for Screening 50 (2018) is 45 years old in both countries today

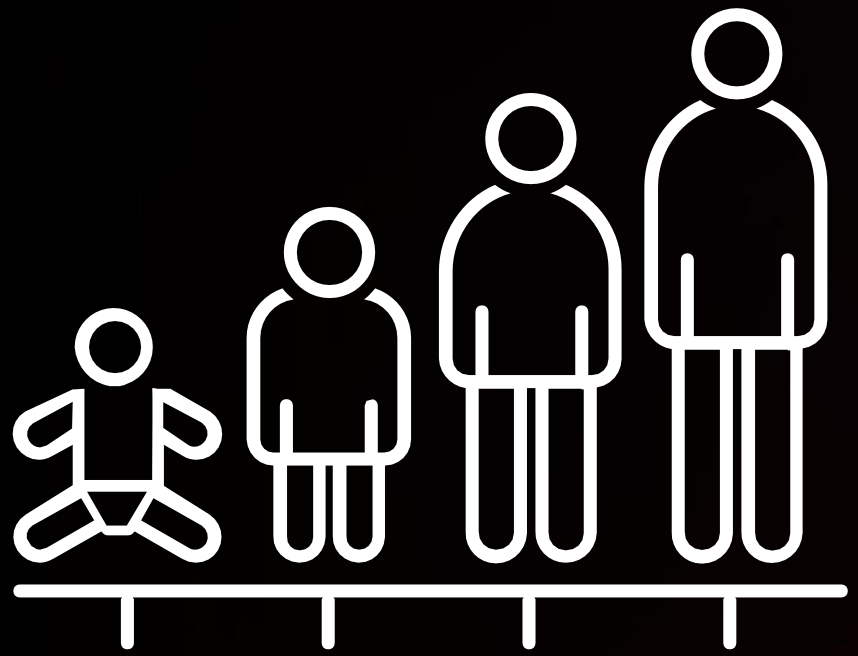
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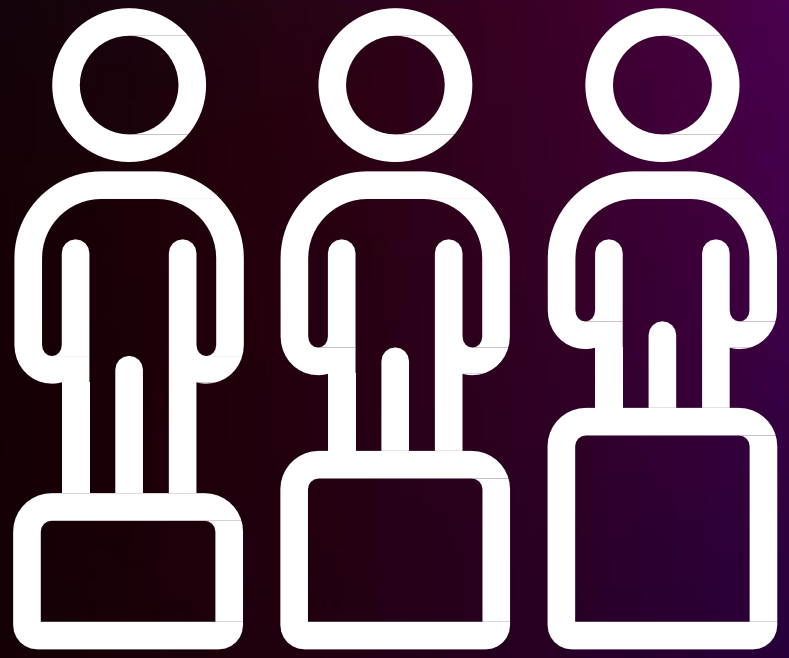
Health Equity is not Equality



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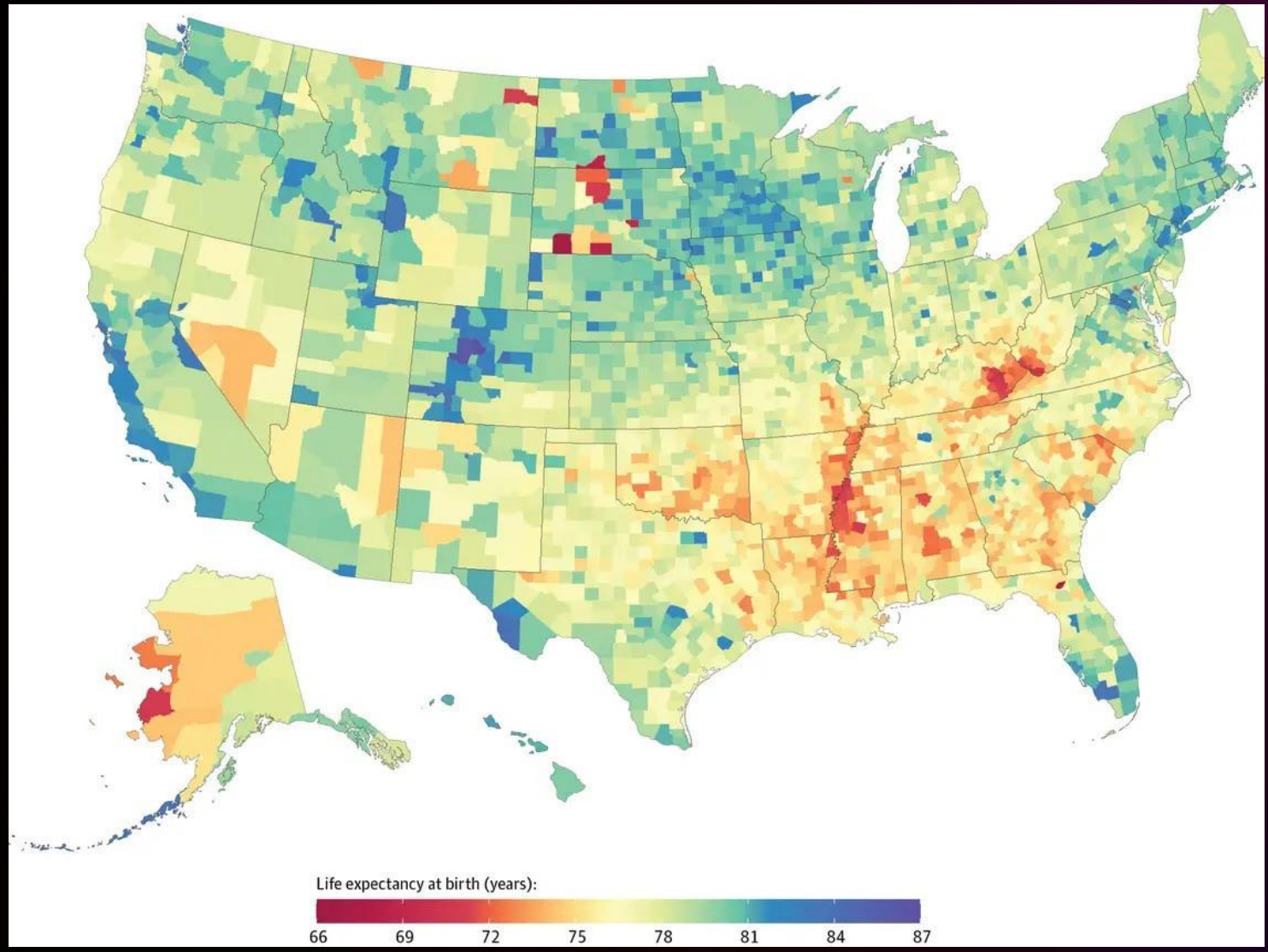




EQUALITY VS EQUITY

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Life expectancy disparities in the U.S



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REF: JAMA 2017

Social Determinants of Health Equity



Economic Stability



Education access and quality



Healthcare access and quality



Neighborhood and Built Environment



Social and Community Context

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Inequities in Technologies for Global Health



Internet connectivity



Type of mobile devices used



Algorithmic bias



Data availability



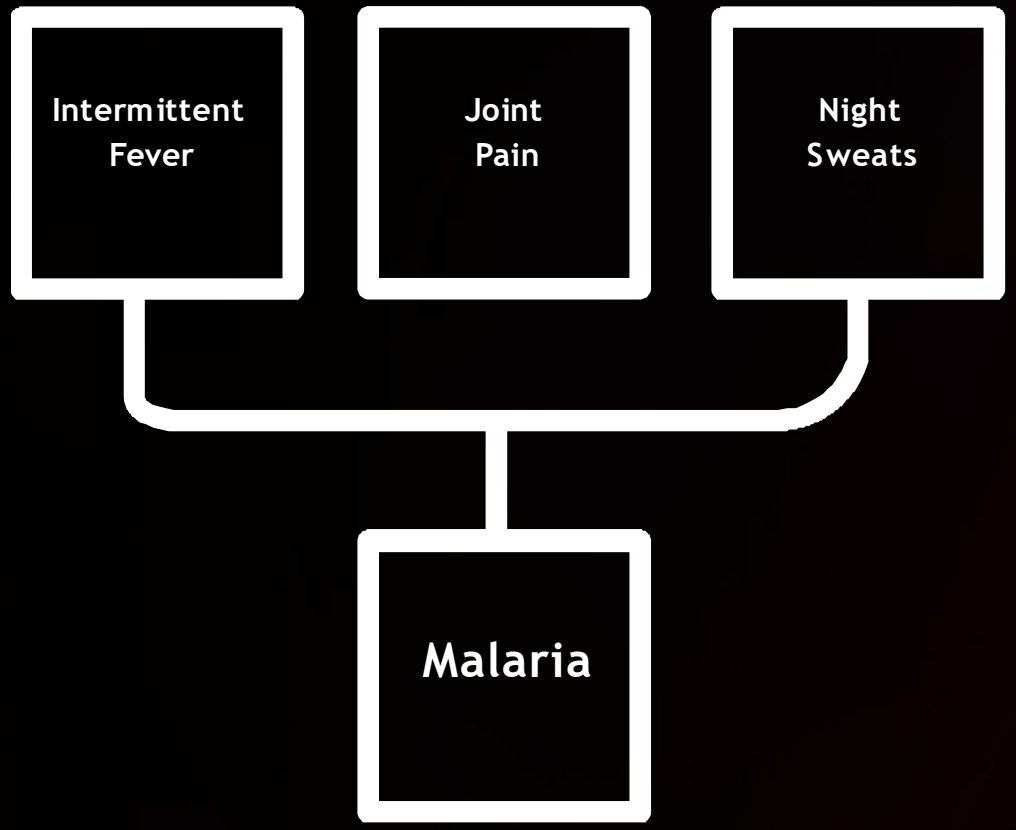
Data Diversity and Machine Learning



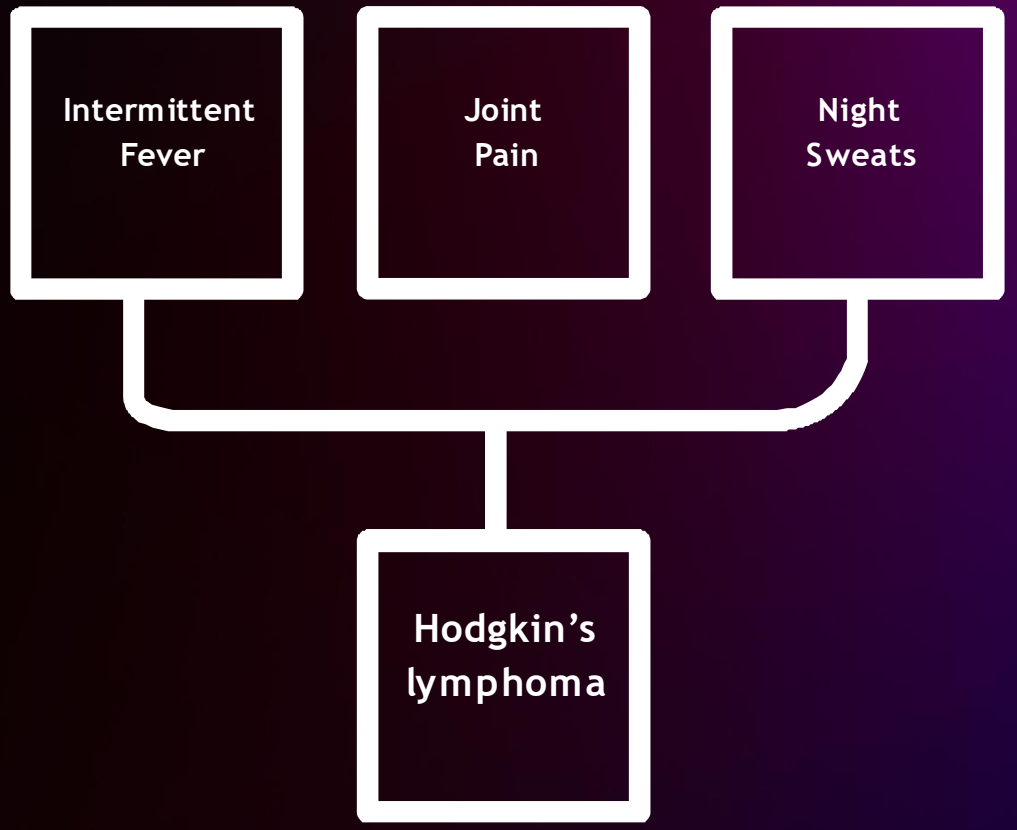
Ethics

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Examples of Diagnostic Algorithm Differences



SUB-SAHARAN AFRICA



UNITED STATES

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Addressing Health Inequity with Culturally Sensitive AI and Technologies



Building with the user(s) in mind - human centered approach



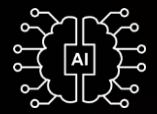
Contextualizing the clinical context



Aiming for sufficient data diversity



Continuous R & D



AI Ethics

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Thank you!

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