BIOMEDICAL DATA SCIENCE PRESENTS:
BIODS 260
10/06/22 1:30PM-2:30PM
MSOB X303 (SEE ZOOM DETAILS BELOW)

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TITLE:

Precision health for all: developing inclusive datasets and algorithms

ABSTRACT:

Large biomedical datasets coupled with machine learning tools have the potential to transform the practice of dermatology. For example, analysis of skin disease images could help triage patients prior to the clinical visit and precision genomic medicine could identify personalized treatments for skin disease. However, biased datasets and algorithms that exclude underrepresented groups could exacerbate existing health disparities in dermatology. This talk will discuss working towards inclusive precision medicine through three examples: 1) assessing fairness in datasets and AI algorithms used for diagnosing disease in dermatology 2) developing an inclusive patient-facing algorithm to improve the quality of images submitted for teledermatology and 3) developing a pharmacogenomics algorithm that accounts for population diversity. In order to develop a data-driven approach to dermatology that improves health disparities, rather than exacerbating them, we must be mindful of developing inclusive datasets and algorithms.

SUGGESTED READING:

- https://www.science.org/doi/10.1126/sciadv.abq6147
- https://jamanetwork.com/journals/jamadermatology/article-abstract/2784295
- https://ashpublications.org/blood/article/124/14/2298/33101/Genetic-variant-in-folate-homeostasis-is

Zoom link:
https://stanford.zoom.us/j/98364414259pwd=dk1NMTB6OWIJQ0hmSVhvemNNaGs2dz09
Meeting ID: 983 6641 4259
Password: 406712