THE UNIVERSITY OF ARIZONA
COLLEGE OF ENGINEERING
Biomedical Engineering

DEPARTMENT OF BIOMEDICAL ENGINEERING SEMINAR SERIES

PRESENTS

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"Digitization, data, and computation in medicine: perspectives from a healthcare startup"

ABSTRACT:

Digitization, data, and computation are of ever-increasing importance in engineering and medicine. I will discuss how these factors are impacting the study of complex diseases and how it helps frame my work at LookDeep Health, a Bay Area startup focused on computer vision in healthcare.

Body movement and activity are powerful readouts of underlying disease severity, especially when monitoring someone being treated for sepsis, delirium, and other kinds of organ failure. The plummeting cost of cameras, combined with the increasing power of computer vision, opens up opportunities to solve (at scale) critical challenges associated with patient monitoring in hospitals. At LookDeep Health, we are developing technologies to generate three rich data streams: 1/ real-time patient motion and activity; 2/ real-time hospital room environment; and 3/ video summarization of patient and hospital room events. These data streams will help clinicians and hospitals improve outcomes in diseases like delirium and sepsis. The data also will help increase the underlying economic value of hospital care.

BIO:

My name is Mike Choma. I'm an MD/PhD physician-engineer and the Vice President for Clinical Solutions at LookDeep Health. At LookDeep Health, I lead partnership development with hospitals as well as the clinical science focus of our work. A key part of my job is to align computer vision technologies with specific clinical use-cases. Prior to LookDeep Health, I was a scientist at Facebook.

My first scientific love was physiology. That led me to study biomedical engineering and to get a medical degree. My second scientific love was lasers. That led me to get a PhD that focused on optical physics and laser imaging in medicine.

Before joining industry, I was faculty at the Yale School of Medicine. I ran a lab that focused on using new cameras and laser sources to measure physiology in new ways, with a focus on heart and lung physiology. I also was an attending in the pediatric primary care clinic. I remain as an Adjunct Associate Professor at Yale.

At Yale, I became very interested in digital health and technology translation. My involvement in digital health included digital heart sounds, a smartphone app for pregnancy health, and wearables to track lung health. I also gained experience with academic-industrial partnerships.

Please join us on

Monday, November 9th, 2020

12:00-12:50 pm, https://arizona.zoom.us/j/94765815841

Hosts: Dr. DK Kang and Dr. Russ Witte
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