

Computer Science Colloquium

Advancements and Challenges for Deep Learning in Medical Imaging

Speaker: Pranav Rajpurkar

Host: Steven Zucker



Monday, February 8, 2021
4:00 p.m.

Zoom Presentation

ABSTRACT:

There have been rapid advances at the intersection of AI and medicine over the last few years, especially for the interpretation of medical images. In this talk, I will describe three key directions that present challenges and opportunities for the development of deep learning technologies for medical image interpretation. First, I will discuss the development of algorithms designed to work in low labeled data settings for clinical applications. Second, I will discuss the design and curation of large, high-quality datasets to drive advancements in AI. Third, I will discuss the real-world impact of AI technologies on clinicians' decision making. Altogether I will summarize key recent contributions and insights in each of these directions using examples across medical specialties including radiology, cardiology, and pathology.

BIO:

Pranav Rajpurkar is a final year PhD candidate in Computer Science at Stanford, where he works on building reliable artificial intelligence (AI) technologies for medical decision making. Pranav's work has been published in 30+ peer-reviewed publications in both scientific journals and AI conferences (receiving over 7000 citations) and has been covered by media outlets including NPR, The Washington Post, and WIRED. Pranav founded the AI for Healthcare Bootcamp at Stanford, where he has worked closely with and mentored over 100 Stanford students and collaborated with 18 faculty members on various research projects. He designed and instructed the Coursera course series on AI for Medicine, now with 40,000+ students. Pranav's PhD was jointly advised by Dr. Andrew Ng and Dr. Percy Liang at Stanford University, where Pranav also received both his Bachelors and Masters Degrees in Computer Science.

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