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Meet Our Speakers

Raymond Lowe
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Chief Medical Information Officer
UPMC Children’s Hospital of Pittsburgh

Susan Heichert (Moderator)
President
The Cedar Isles Organization
• In some trials, ‘deep learning’ systems have outperformed human experts

• Diagnosis (Greek: knowing apart)

• ML algorithms will only become better at such knowing apart- at partitioning, at distinguishing moles from melanomas

• What are the legal liabilities if the machine makes the wrong prediction?
AI in Diagnosis of Pneumonia

Stanford Algorithm Can Diagnose Pneumonia Better Than Radiologists

It took Stanford AI researchers just a month to beat radiologists at the pneumonia game

By Tekla S. Perry

IEEE.org; Nov 17, 2017
A “Fundamental Theorem” of Biomedical Informatics

CHARLES P. FRIEDMAN, PhD

Figure 1. A “Fundamental Theorem” of informatics.

Figure 2. What informatics is not.
AI in Social Media

Facebook created an AI tool that can prevent suicide, but won't talk about how it works

- New artificial intelligence that can proactively identify heightened suicide risk and alert a team of human reviewers who are trained to reach out to a user contemplating fatal self-harm.

- Before the AI tool was even publicly announced, Facebook used it to help dispatch first responders in 100 "wellness checks" to ensure a user's safety.

- Behavior or language patterns that emerge prior to suicidal thinking or a suicide attempt.

mashable.com; Nov 28, 2017
Value equation in Health Care

$Value = \frac{Quality}{Cost}$

Quality = Outcomes + Safety + Service

Service = Satisfaction + Access

Making the case to improve quality and reduce costs in pediatric health care
Conclusions - Impact of AI in Healthcare

• AI & related technologies are here to stay

• “A machine will make the same prediction on a specific image every time”

• Collaboration amongst clinicians and between clinicians and technologists on adoption of augmented intelligence

• “We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten” - Bill Gates

• The best medical technology of all time- the stethoscope

• Physicians who embrace/use AI vs those who do not
Questions?