



AI IN MEDICAL DIAGNOSIS

EVIRA SOULTOGIANNI

Digital Analytics Meetup #5 – Digital Health

Interest in Healthcare

---> 4 V's of Big Data

Volume

Velocity

Variety

Veracity

---> data complexity

---> minimize fatality

---> improve quality of life

Motivation for AI

Personalized Medicine:

- medical profile
- genetic material
- life style

AI accesses more data in less time

↳ better and more suitable therapies

<https://www.youtube.com/watch?v=Pw-cwjQFHWY>

AI Applications

- > mining medical records: Google DeepMind Health
 - > identifying risky/ not risky test results
- > assisting repetitive jobs: Medical Sieve (IBM)
 - > save time, detect problems more reliably
 - > potential oversimplification of reality?
 - > strict approach to medical cases

In-Person Consultation

Before

- > save waiting time; before and/ or after arriving
- > task organizer for doctors

During

- > apps/ AI solutions to take vitals instead of nurse
- > administrative tasks and reports
- > make hard decisions rational

<https://www.youtube.com/watch?v=IRhg6yxenY4>

Buddhism on AI

A Buddhist Perspective on Artificial Intelligence

Karimi, Bryson, Karimi

- > 'man vs machine' or 'man with machine'
- > main teaching is the principle of change
 - > nothing remains the same from one moment to the next
- > decision making
 - > Humans: acquire information as time progresses
 - > AI: uses stale hard-coded information

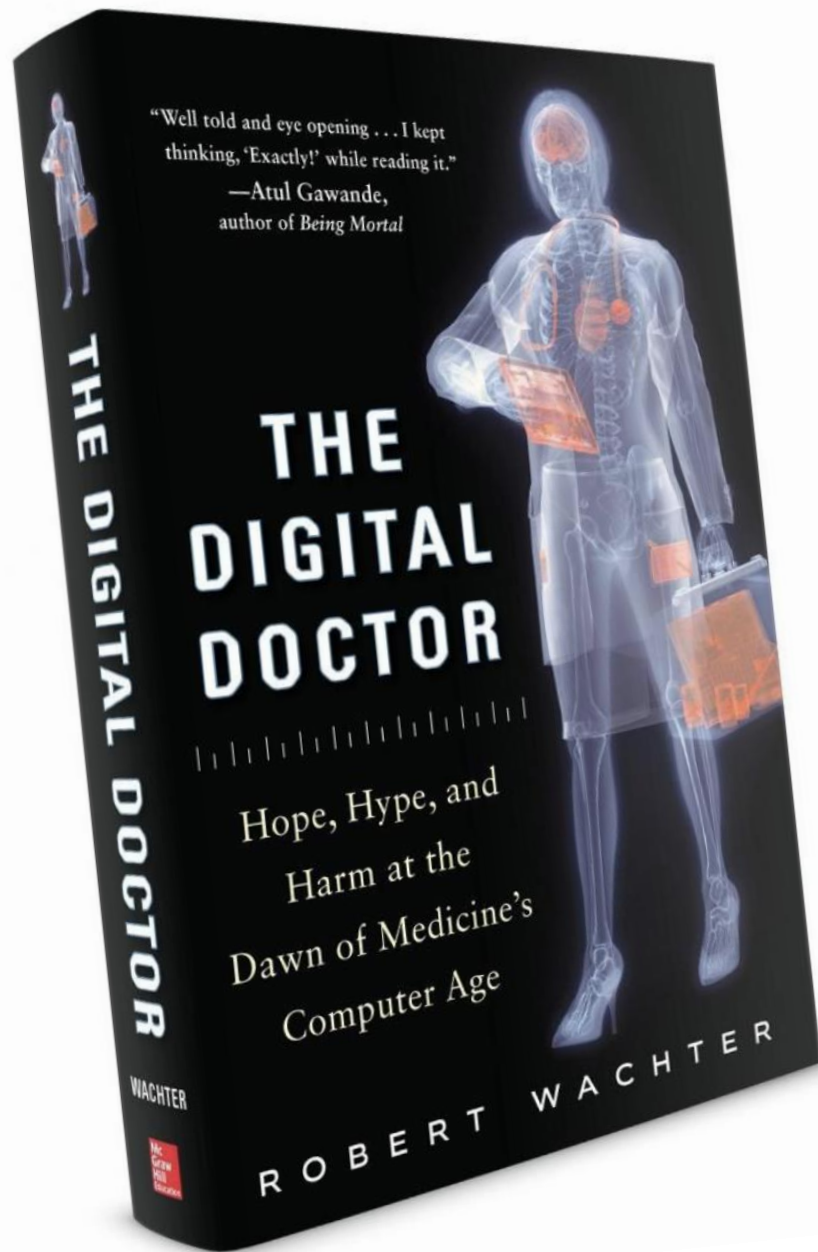
<http://myweb.ncku.edu.tw/~stli/www/teach/ke/buddhist.pdf>

Food for Thought

1. Will we ever live in ages where cognitive machines will take over and humans will serve those?
2. By developing AI further, do we aim for generalized solutions or personalized ones? Or both?

References

- Artificial Intelligence Will Redesign Healthcare, Medical Futurist
<http://medicalfuturist.com/artificial-intelligence-will-redesign-healthcare/>
- Artificial intelligence in healthcare: past, present and future. Jiang, Zhi, Dong, et. al. BMJ Journals, 2017. Found:
<http://svn.bmj.com/content/early/2017/07/29/svn-2017-000101>
- 10 Ways Artificial Intelligence Could Make Me a Better Doctor. Medical Futurist. Found:
<http://medicalfuturist.com/10-things-how-artificial-intelligence-could-make-me-a-better-doctor/>



Robert Wachter

Professor of Medicine at UCSF

- How analytics interrupt healthcare
- Medical errors
- Real cases and interviews

THANK YOU!

