

Thoughts on AI, Ethics & Society

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Yale, as an integrated university, is a great place for studies in AI, Ethics & Society -- Connections for Biomed. Sciences

- Yale has Natural Sci., Social Science, Engineering, Medicine & Law faculty on same physical campus
 - Not many other great universities have this in one place ! Good to leverage
- Yale has a large biomedical sciences faculty that may be able to contribute to some of the issues related to AI, Ethics & Society

Areas where biomed. science relates to AI, Ethics & Society:

Privacy (a particular interest of mine)

- Traditional considerations
 - Medical records
 - Now wearable sensors
- ... but DNA privacy different
 - Perhaps more fundamental
 - Cross-generational & only in the future will learn about it's implications
- ... but there's great need for sharing
 - Obvious (statistical) power in aggregating data sets, an obvious path forward towards discovery
 - Dealing with Pb-scale "private" datasets is difficult in academic environment

Other areas where biomed. science connects to AI, Ethics & Society. Much to say on...

- Relating Modeling & Mining
 - Statistical description (prediction) considered useful but not fully adequate explanation in Natural Science
 - Need for a cause & mechanism and as simplified a description as possible
 - The 4 M's of systems bio.: Measurement, Mining, Modeling & Manipulation
- Developing “balanced” cohorts & training sets
 - Correcting for ancestry, ascertainment & doing reproducible research
- The fundamental basis for evolvable systems, robustness & systems design, the basis of consciousness
 - To contrast with man-made systems -- eg connectivity associated with constraint in biological networks but not in man-made ones