Data Science Ethics

College of Science

Al-Mustaqbal University

Stage 2 , Semester 1
@ Department of Intelligent Medical Systems

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Code of Data Science Ethics

The majority of this course material is based on Coursera
https://www.coursera.org/learn/data-science-ethics
"H.V. Jagadish lectures", a Professor at the University of Michigan

Code of Data Science Ethics

Professional codes are there in many professions.

Hippocrates, for example, was a Greek doctor who introduced this notion of the ***Hippocratic oath*** in medicine. And there are a number of things that this says including, very famously, "***First, do no harm***."

Many other professions, lawyers, journalists etc., have ***oaths*** that they take and ***codes of conduct*** that have been established for their behavior.

Professional Codes

- **Some professions have established codes of conduct.**
  - *E.g. Hippocratic oath in medicine*
    - *"First, do no harm"*
  - *E.g. Lawyers' oath on admission to the bar.*

HIPPOCRATES 468-377

Bar : American Barrister Association

Similar code for data scientists is really needed.

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Regulation is not the answer. (in Data Science)

Why?

Technology advances quickly. Regulation moves slowly. If we rely on regulation, we will be regulating yesterday's technology, and because we're regulating yesterday's technologies, we'll allow many *abusers* because they comply with outdated regulations.

As an example of regulations being slow, here is a sign at an amphitheater. It says unauthorized use of tape recorders and cameras is not allowed. So what they mean, presumably, is an unauthorized recording of any sort is not allowed, but they said tape recorders and cameras.

Slow Regulation

AMPHITHEATER REGULATIONS

NO SMOKING · FOOD BEVERAGES · PETS BAREFEET OR UNAUTHORIZED USE OF TAPE RECORDERS & CAMERAS

Thank You

• Can I record audio on my cell-phone?
• It is not a "tape recorder"

And the question is, if I want to record a concert and I record it on my cell phone, is that okay? My cell phone is not a tape recorder. And by the letter of the law here, that is probably fine.

Surely, it's this kind of situation that lawyers can have a field day with. And this is an issue of wording laws precisely in a world where the technology shifts fast.

So, we as data scientists should own our own destiny. We shouldn't have corporate lawyers defining this for us.

Professor H.V. Jagadish, of University of Michigan

I am proud of being a data scientist. I'm excited about the good things the data science can do, and I want us as data scientists to act ethically so that I can continue to be proud of what I do, and we as a field can continue to be successful in terms of society appreciating us and valuing the benefits that our work provides to them.

Jagadish's Code of Ethics

1. Do not surprise

- Do not surprise the data subject with what data (about the subject) you collected, shared, or used.
- It is fine to surprise others, not subjects.

2. Own the outcomes

- If the process leads to undesirable outcomes, work to modify the process even if there is nothing "wrong" with it.

Do not surprise covers things like *who owns the data*, *what the data can be used for*, things of this nature.

Own the outcomes includes things like *what is valid*, *what is fair*, *what are the social* .