ETHICAL DATA SCIENCE

Systems Analysis

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1 What is ethics?

2 Study Cases

3 Large Language Models





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Ethical Behaviours

Ethical behaviors are hard to define and deal. Sometimes it hard just to explain **why** some actions could be not ethical.





Bad Use of Data

Bad use of data is a problem, ignore details for example. Even worts, use **unbalanced data** to make decisions.





Sharing Data

The share information is a problem right now. Even if you try to convert some part of the information into anonymous, someone could **de-identified** just making the right questions over the data.





Privacy in Modern Times

Privacy of the data is also a big problem. Internet and social networks are a source of **data filtration**, you could be under attack at any moment.





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Selfies in Social Networks

Nude photos even with distorted faces are not enough. Or a photo of you at the beach where more people appear, you are **exposing** more people without intention.





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DNA for a Good Cause

If you share your **DNA** for a research project, you are also exposing part of DNA information of all your family. Maybe it is not ethical unless you have permission of all your family (even the dead ones).





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Deepfakes, DeepVoices, a Deep Problem

Deepfakes, or any other kind of suplantation is a current problem, in special to **spread misinformation** or change peopleś mind in a bad way. Indeed, what is the *bad way*?





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Training Data, CopyRight, Laws, and Al

- Current artificial intelligence popular models, a.k.a. LLMs, are the current attorneys preferred cases.
- The train data used is the first problem: not is always public, not always is ethical to used. Also, a lot of legal conflicts with public and semi-public data. Who is the owner and how to respect its creation rights?
- Who is the owner of Al outputs? there is no laws for that, the copyright could be just attached to a human or company figure.





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Picasso UD

- If you study Picasso a lot, and learn his style, are you a thief or need to pay money to Picassoś family?
- Why does it is a problem in artificial intelligence?



Figure: Prompt: Draw the build of Universidad Distrital Francisco Jose de Caldas in Bogota-Colombia in a Picasso style.



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Thanks!

Questions?



Repo: https://github.com/EngAndres/ud-public/tree/main/courses/systems-analysis



