

Ethics of Pattern Recognition

Good, bad, maybe both?

Applications

(Not even close to being exhaustive)

- **Computer aided health diagnosis**
- Face recognition
- Fraud detection
- Speech recognition
- Hate behavior detection on social media
- ...

Pros (medical application)

- Cheap and fast diagnosis, much cheaper than doctors
- Reasonably accurate
- Can automate tedious tasks
 - Example: identifying and measuring nodules on a CT scan
- Can work as powerful recommendation system for doctors, rather than replacing their diagnosis
 - Might help catching rare diseases early

Cons (medical application)

- Unreliable without a doctor's supervision:
 - User input is often imperfect
- Lack of traceability and culpability:
 - How to explain a mistake made by the system? Who to blame?
- Research doesn't always consider bias in datasets:
 - Available data can be heavily influenced by what the doctor was already suspecting, which exams were requested, etc.
- Recommendation systems might induce cognitive bias on doctors:
 - *Anchoring* and *priming* effects

ADEME - The Restoration Gamble (4)

- **NOT frugal generation (1):** nothing in this technology suggests production at low levels of output;
- **NOT regional cooperation (2):** no indication of political reorganization;
- **NOT green technologies (3):** the potential of making technology “greener” is not obvious;
- We are left with **scenario 4**.



Really makes you think 🤔

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