Algorithms and Distribution
Algorithmic decision-making

Different algorithms may lead to different distributions of benefits and burdens

How do we evaluate these ethically?

➢ Distributive justice!
Principles of distributive justice provide moral guidance for the processes and structures that affect the distribution of benefits and burdens in societies.

From the *Stanford Encyclopedia of Philosophy*
Distributive Justice

Applicable to all kinds of decisions that generate distributions of burdens and benefits...

Algorithmic or otherwise.
Here’s a (intuitive and non-exhaustive) list of principles of distributive justice...
Vaccine Distribution

- Having a limited number of vaccines and a large population, how do you allocate vaccines?
  - Globally
  - Nationally
  - Locally

➤ Let’s think about this at the local level
Vaccine Distribution: Principle 1

- Ensure that as many people as possible get vaccinated, regardless who they are.
- The highest quantity at the lowest cost and in the shortest time frame.
- E.g. vaccination centers in densely populated areas of the city.
Maximize well-being

Secure the greatest net benefit
Vaccine Distribution: Principle 2

- Ensure that the most vulnerable populations have access to vaccines before anybody else
  - Age
  - Race
  - Class
  - Comorbidity
Prioritizing the worst off

Choose the distribution that prioritizes groups and individuals who are worst off.
Vaccine Distribution: Principle 3

• Vaccinate the members of historically marginalized groups first.
Avoiding Compounding Injustice

Do not impose a disadvantage on members of a demographic group that has faced historical discrimination.
Principles of Distributive Justice

- Maximize well-being
- Prioritize the worst-off
- Avoid compounding historical injustice
Principles of Distributive Justice

- Maximize well-being
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INTUITIVE AND NOT EXHAUSTIVE LIST
Principles of Distributive Justice

- Maximize well-being
- Prioritize the worst-off
- Avoid compounding historical injustice

Also applicable to distribution of benefits and burdens through algorithmic decisions.
Thank you!