RESPONSIBLE AI

Week 8: Capstone Planning & Avoiding Techno-Solutionism

TODAY'S OBJECTIVES

- How do implementation and other non-technical considerations affect the ethical impacts of AI?

- How do we design proposals and analysis plans for data science projects?

- Planning the Q2 project proposal and forming Q2 project groups

IMPLEMENTATION MATTERS

	New Mexico	Michigan
purpose	Automatically identify individuals who are filing fraudulent unemployment claims	Automatically identify individuals who are filing fraudulent unemployment claims
algorithm	?	?
implementation strategy	1. Deploy the algorithm 2. Send pop-ups to individuals flagged by the algorithm as they fill out their claims, reminding them to honestly report their information	1. Deploy the algorithm 2. Fire human employees in the fraud detection unit 3. Immediately initiate legal action against individuals flagged by the algorithm 4. If they do not respond within 30 days, initiate legal action including garnishing wages or tax refunds
result	~25% increase in additional earnings reported by individuals who saw the pop-up	Individuals falsely flagged by the algorithm incurred ~$60M worth of legal and other costs; the state is being sued to recover those costs

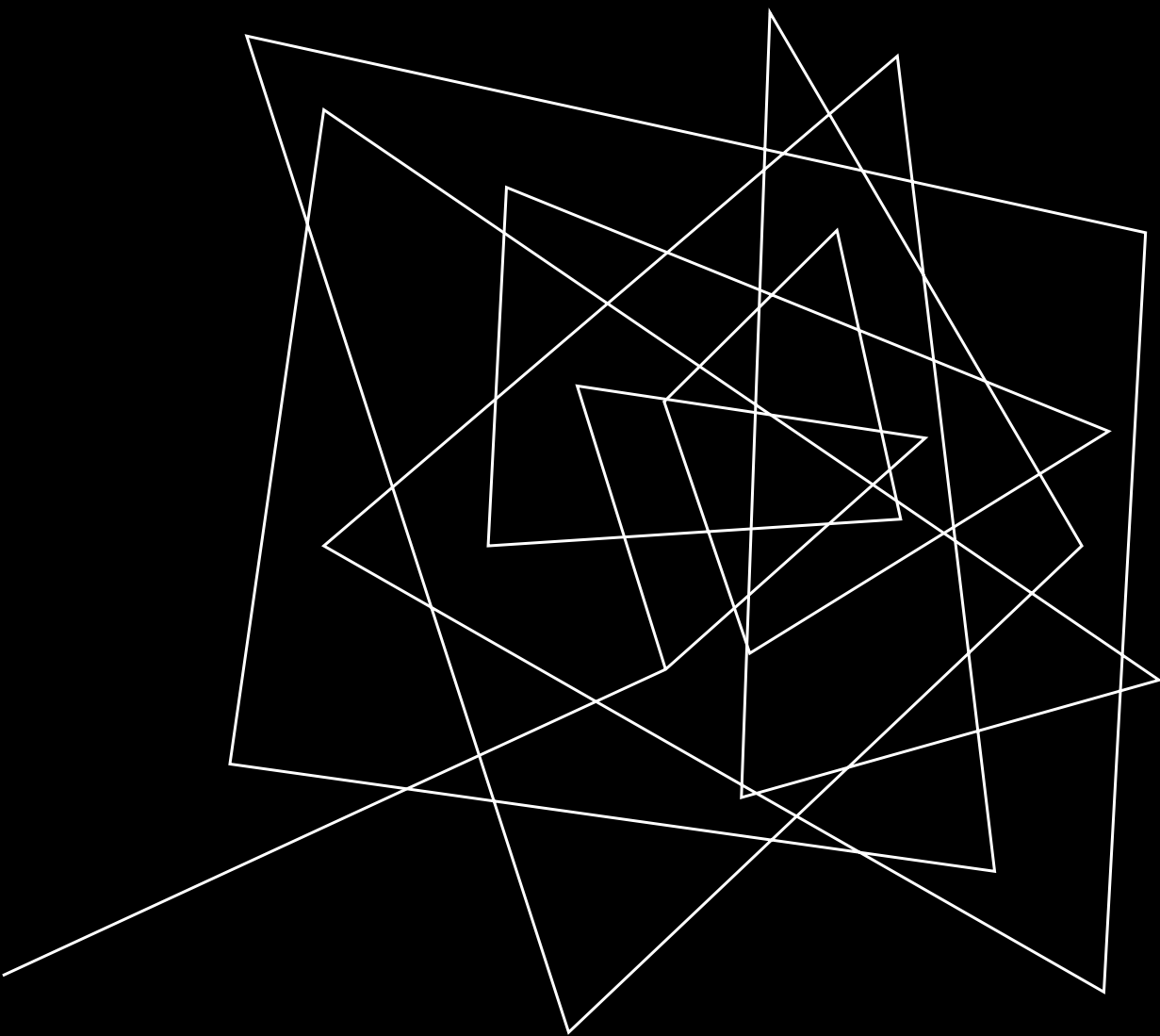# IMPLEMENTATION MATTERS

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Even if an **identical** algorithm was used in both examples, the outcomes would still be dramatically different – and that's because of implementation!

READING PRESENTATION:

Algorithmic Fairness and Vertical Equity: Income Fairness with IRS Tax Audit Models

DISCUSSION

Think about the ways you measured fairness during the Q1 project. Are there any potential fairness issues that you think can be solved through the pre-, in-, and post-processing techniques we've previously discussed? Can any *not* be solved through technical solutions?
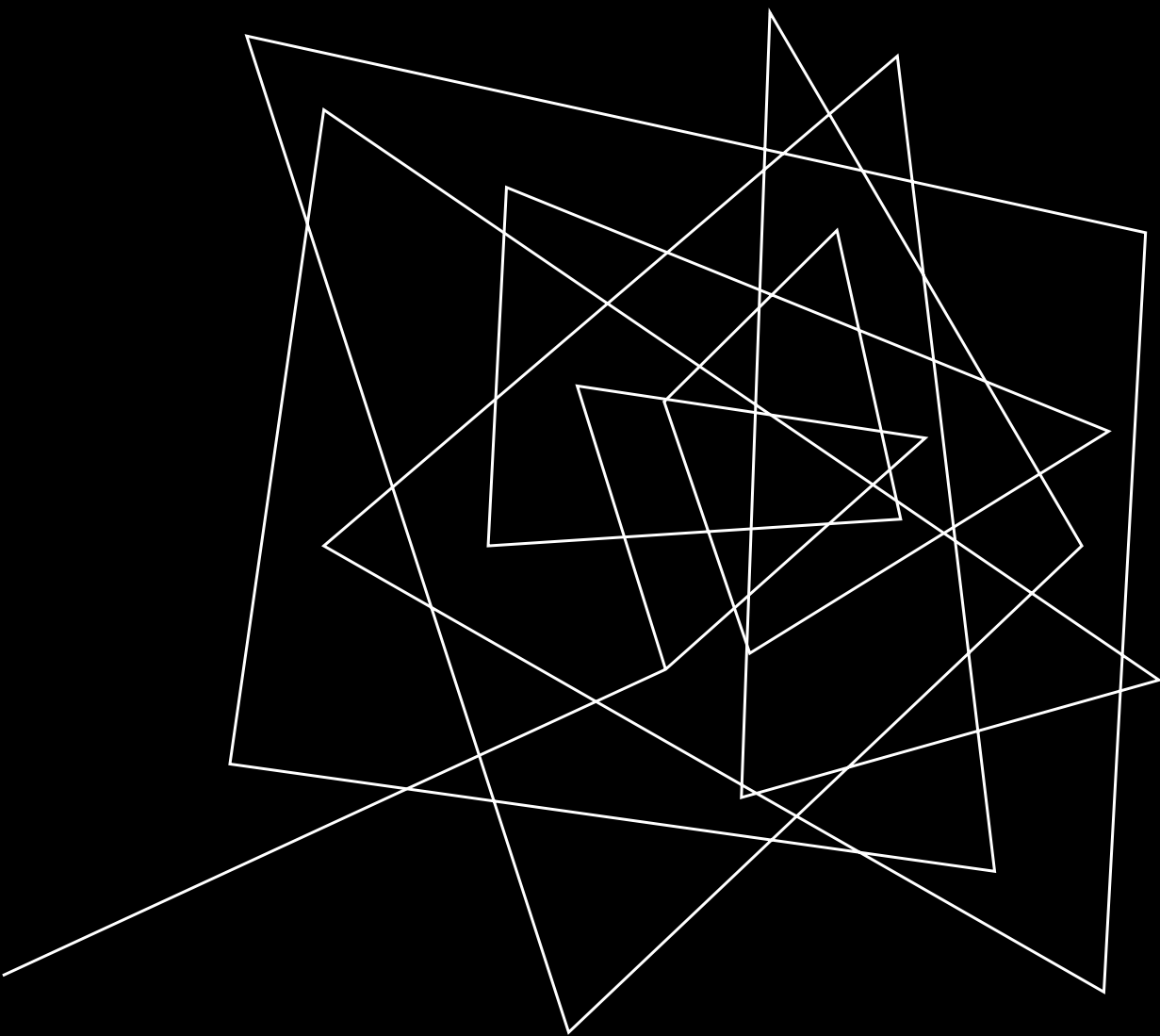
Are there any non-technical interventions that you think are necessary for anyone trying to implement policies based on a utilization model?

PUTTING TOGETHER A PROJECT PROPOSAL

- Topic, Aims, Contributions

    - Your general subject area and topic

    - Why your topic is significant

    - Your research questions / hypotheses

- Background & literature review: how does your work fit in to the broader landscape? Is it sufficiently novel?

- Process and Logistics

    - Research methods: data, processes, necessary resources

        - Is the data available? Is it of a sufficient quality to run your desired analysis?

        - What will the outputs of your analysis look like?

    - Ethical considerations: will you be surveying, experimenting on, or otherwise working with human subjects? Will you be working with sensitive data?

    - Timeline: can this work be completed in a reasonable amount of time? What is your plan for completing it? Which team members will have which responsibilities?

Q2 CAPSTONE PLANNING

Group formation and topic brainstorming

FOR NEXT CLASS

- Your final participation questions will be due at 10AM PT on Thursday, 12/1

- Complete your Q1 project reports and your Q2 project proposals