Systemic Justice & Data Activism: A Problem-Solving Curriculum for High School Students

Lina Henriquez¹, Raechel Walker², Cynthia Breazeal²
¹MIT Summer Research Program
²Department of Media Arts and Sciences, Massachusetts Institute of Technology

01 abstract
- A more interconnected world, leads to more complex problems
- Computing is often presented as a neutral field with no connection to social justice or entrepreneurship
- We need to give students tools to dissect complex problems, find solutions, and provide evidence
- Focused on the first step of Social Entrepreneurship, “understanding the problem”
- Leveraged a novel framework titled, Systemic Justice, to understand problems
- The Systemic Justice framework assisted students with dissecting problems to a greater degree and becoming advocates for accurate and ethical data science & design processes

02 systemic justice framework
Systems Thinking + Design Justice = Systemic Justice
Why is there a need for Systemic Justice? Lack of attention to systems, justice, & equity

03 methodology
- 2-day workshop
- 12 high school students
- Pre- and post- surveys
- Systemic Justice Framework
- Deepnote - Python (Pandas, Matplotlib, & Seaborn)

04 results
Activity 1: Understanding a Problem in Schools
Activity 2: Analyzing a Problem through Data
Activity 3: Evaluating problems and creating solutions through vision boards

“I’ve learned about data activists on the femicides in Mexico, in the 1619 Project, in Bryan Stevenson’s Legacy Museum—so people are still changing what a designer looks like to pave more ways to liberation.” - Student

“Better information leads to better decision making which leads to a better world” - Student

05 conclusion
- Future work includes empowering students with skills to advocate and find data to make well informed decisions

06 acknowledgements
- I want to thank Raechel Walker, Dr. Alghowinem, and Dr. Breazeal for all their guidance and support
- Special thanks to the group of students that allowed me to test the curriculum and learn from them. Your creativity inspires me!