



LESSON PLAN

Algorithmic Justice League

<i>Title</i>	Algorithmic Justice League
<i>Course</i>	Courses in Computer Science and Engineering
<i>Author</i>	Melissa Morris, Assistant Professor in Residence, UNLV Karen Rambo, Associate Professor, Texas A&M University
<i>Time duration</i>	The assignment includes a video and set of questions to be completed outside of class time, followed by a 10-15 minute in-class discussion.
<i>Overview</i>	This activity is designed to explore how diversity can influence computer programming. As technology advances it become as more integral part of our everyday lives. You probably don't give a second thought to unlocking your cellphone with your fingerprint or walking up to an automatic door, and its opening. As engineers and computer scientists develop technologies that rely on interfacing with humans, it is important they consider the diverse populations who will interact with the technologies.
<i>Objective</i>	<ul style="list-style-type: none">• Develop awareness about the ethical issues that are associated with the technology• Identify tangible examples of how technology interacts with diverse population
<i>Materials</i>	Student Handout (see last page/attachment) Online video and questions found in attachment. https://www.ajlunited.org/
<i>Procedures</i>	Students watch a video and complete a set of questions outside of class time, followed by a 10-15 minute in-class discussion.
<i>Discussion Guide</i>	Start the discussion by reviewing the premise of the assignment: The majority of new ideas are really combinations of existing ideas. Meaning, the more people who come together from different backgrounds, with different

experiences, the more likely it is that their ideas can result in a new idea!

The students watched a video about issues related to diversity and computer programming. They were asked to discuss about what ethical concerns that they can face as an engineer and how to address those within the NSPE Code of Ethics.

1. Ask the students to read the NSPE Code of Ethics
2. Ask the students to identify at least two elements of the NSPE code of ethics that were violated by the bias in the underlying code in the scenario on the video by the Algorithmic Justice League.
3. Ask the students to post a brief summary (2-3) paragraphs on the “Considering inclusivity and Technology” discussion board in eCampus.
4. Ask the students to comment on two of their peers’ posts

Modifications

This activity can be modified and adapted to fit different curricular needs. For example, it may help to bring in your own personal examples of how diversity resulted in a better product or process, or you may follow up the in-class discussion with further reflection questions.



This work is licensed under the [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

This work was supported by grants from the National Science Foundation (NSF Award #: 1725880, 1432601). Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Online Activity

Algorithmic Justice League

As technology advances it become as more integral part of our everyday lives. You probably don't give a second thought to unlocking your cellphone with your fingerprint or walking up to an automatic door, and its opening. As engineers and computer scientists develop technologies that rely on interfacing with humans, it is important they consider the diverse populations who will interact with the technologies.

Part 1:

Watch the following Video regarding issues related to diversity and computer programming.

<https://www.ajlunited.org/>

While reflecting on current and emerging technologies, consider the challenges and concerns associated with having people of different races, ethnicities, genders, ages, body types, etc. interact with the technology. Whenever humans are interacting with technology there are also ethical concerns.

Now, read the NSPE Code of Ethics. Identify at least two elements of the NSPE code of ethics that were violated *by the bias in the underlying code* in the scenario on the video by the Algorithmic Justice League. What are some specific steps you as an engineer should take to ensure you are behaving within the NSPE Code of Ethics?

Part 2:

Post a brief summary (2-3 paragraphs) which addresses the above questions on the "Considering Inclusivity and Technology" discussion board in eCampus. You must also comment on two of your peers' posts to receive credit.

Common Reflection Questions for All Activities

1. Will what you learned from this activity affect the way you work in teams for future engineering projects? Please Explain why or why not.
2. What did you learn from this activity?
3. What did you like about this activity?
4. What would you suggest to improve this activity?

