# Ethical and Social Implications of Computing

In this lesson, students will explore several areas related to the ethical and societal implications of computing systems. This includes the professional computing code of ethics, system reliability, legal issues and intellectual property concerns, and bias in computing. This lesson corresponds with AP Computer Science A topic 5.10.

## Objective

Students will be able to:

* Explain the ethical and social implications of computing systems

## Computing and Your Life

Begin reflecting on your own perspective on this lesson by answering the following questions.

1. What computing systems have you interacted with on a daily basis?
2. How have computing systems impacted your life, in general?

## ACM General Ethical Principles

[Read through the brief description](https://drive.google.com/file/d/1mmddT0ehX-SqM78e7EzIYpKa2JjjLmCt/view?usp=sharing) of each of the 7 general ethical principles for ACM (General Ethical Principles 1.1-1.7). Then choose one of the principles and explain with an example or two how you can adhere to that principle in your own programming practices.

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## Bias in Facial Recognition

[MIT grad student Joy Buolamwini](https://youtu.be/UG_X_7g63rY) was working with facial analysis software when she noticed that the software didn’t detect her face. The people who coded the algorithm hadn’t taught it to identify a broad range of skin tones and facial structures.

Joy is now on a mission to fight bias in machine learning, a phenomenon she calls the “coded gaze.” This is an interesting TED talk about the need for accountability in coding as algorithms take over more and varied aspects of our lives.

As you watch, consider the answers to these questions:

1. What are the advantages of facial recognition software?
2. What are some potential biases in facial recognition software (from the video and your own additional ideas)?
3. Describe what Joy refers to as the “coded gaze.”

## Self-driving Cars

After reading the [Wired article](https://www.wired.com/2016/06/self-driving-cars-will-power-kill-wont-conscience/) about self-driving cars, answer the following questions.

1. What are the pros of self-driving cars?
2. What are some possible ethical problems with self-driving cars?
3. What is a way that we can try to prevent ethical concerns with self-driving cars?