# CSC 126 A03: Ethics and Bugs

Enter your name: Jacob Lewis

## Procedures:

- Assignments such as this one are <u>to be done individually</u>, although you may always discuss the work with the professor, the TAs, and even your classmates as long as you ultimately do it yourself. See the syllabus for information about academic dishonesty.
- Make a copy of this worksheet in your private Google account.
- Change the username in the document title with your username. (The filename for Dr. Pearce would be *A03: Ethics and Bugs - pearcej*.)
- When you are done, under file, choose download as a pdf and then upload and submit your completed activity into Moodle.

## A03: Ethics and Bugs

**Objectives**

- **Begin thinking about ethical issues in robotics**
- **Relate ethical issues wot what we have already learned**

**Although this assignment must be completed individually, you may consult with one another.**

**Complete the following readings:**

1. **Read the first installment in the Case of the Killer Robot: http://cs.berea.edu/pearcej/courses/bottasks/KillerRobot-1.pdf**
2. **Read the short article <u>The Patriot Missile Failure</u>**
3. **Read the article, "What is Ethics" Developed by Manuel Velasquez, Claire Andre, Thomas Shanks, S.J., and Michael J. Meyer of the Markkula Center for Applied Ethics at Santa Clara University: <u>http://cs.berea.edu/courses/CSC126/bottasks/what_is_ethics.pdf</u>**

**Answer the following questions.  I recommend that you read the questions in advance so you know what to reflect upon while you're reading.  Be sure to answer each question fully in complete sentences.**

1. **In 2-3 paragraphs, summarize the main point of "What is Ethics" and discuss your reaction to their definition of ethics. Is this what you thought ethics were? Explain.**

> Ethics is two main things. The ability to rationally choose what is right and wrong. As well as the ability to refrain from actions that hurt others, while living a life honestly and with care for your fellow human being. This includes honesty, compassion and loyalty.
> The other half relates to developing ones ethical standards. Keeping an open mind and always monitoring the ethics not only in their own mind, but also in society to ensure that what they believe is well founded and they are supporting people who support their ethical beliefs.

2. **Briefly summarize what happened in the first installment in the Case of the Killer Robot**

> A malfunctioning robotic assembly arm killed a man in may and the programmer is on trial. His code is discovered and it is revealed he used the average instead of the derivatives of his calculations for the arm movements. A leading expert claims the programmer is "Guilty as hell"

3. **Reflect on the industrial robot described in the first installment in the Case of the Killer Robot.  Use our textbook's definition of a robot to analyze whether this robot meets all of the text's criteria for being a robot.  Explain.**

> The machine in question is able to be programmed to do complex and difficult tasks. This in my opinion makes it a robot.

4. **Chapter 2 of our textbook introduces the field of artificial intelligence (AI). Many concerns about ethical issues arise from AI. Using the definition of ethics from the article "What is Ethics"to identity one important ethical issue you believe arises in AI. Explain both why you think this is an important ethical issue from AI and why satisfies the article's definition of what ethics is.**

> I believe that the main issue with AI is the threat of replacement of writers, artists, programmers, and other important cultural professions with robots that may do it faster, but with none of the soul or passion that human work holds. I believe this has many ethical stakes including loyalty, honesty, and even stealing. AI is recycled content, it uses millions of sources and compiles aspects from each to make an image, but it creates nothing. The only thing AI does is steal from talented and important artists and writers, and churns out a computer generated mess. This on top of the environmental threats AI poses, creates quite a cause for concern in my opinion, despite the millions of other amazing and potential uses for it.

5. Use the "**What is Ethics**" article to list three ethical questions you believe are raised in the first installment of the Case of the Killer Robot story. For each question raised, explain why this is an ethical question according to the definition in "What is Ethics."

> Should a programmer be responsible for machine malfunctions?
> Should the company hold responsibility for failing to safety check equipment?
> What should the punishment be for a mistake of this magnitude?

6. Twenty-eight soldiers died and a hundred or so more were injured in **the Patriot Missile Disaster** due to a software rounding error which incorrectly calculated the time, causing the Patriot system to ignore the incoming Scud missile. Discuss any similarities you see with the case of the killer robot and whether you believe that ethical violations could have contributed to this disaster.

> I believe many connections can be made here. It was a simple mistake that had disastrous consequences. It was easily avoidable seeing as the article states the issue was fixed in other parts of the code. Meaning that the mistake was spotted, but not fully contained before it was sent out. I believe the company responsible for development should be responsible rather than an individual coder. Safety should be priority number 1, especially for weapons. The company failed to accurately check for mistakes in their product, and therefore should be held responsible.

## Integrity statement

Please briefly describe all help you gave to others in completing this assignment and all help you received, including any help from AI.

> I received no help from AI

## To Submit

- When you are done, under file, download this file as a pdf and then submit it into Moodle.