



**ENCS4210, COMPUTER ENGINEERING ETHICS.**

**Paper #2**

**Student: Mohammad Salem – 1200651.**

**Section 2.**

**Dr: Abdel Salam Sayyad**

**Date: 22/12/2023.**

# Ethics of AI System Development

## Abstract:

In this research paper the researcher will answer the following questions:

- What are the dangers of AI?
- What is the responsivity of companies or individuals developing AI system?
- Is it better to develop open-source AI system?
- What is the role of governments in regulating AI system?

## 1. Introduction:

Since ancient times, it has been a human dream to create a machine that mimics human tasks in its performance. Efforts in the field of artificial intelligence have passed through multiple stages of enthusiasm and despair. However, what are the ethics of building an artificial intelligence system?

## 2. literature review and answering questions:

### **2.1 Kantian Theory**

Human mental should cultivate desire to do right thing. so, your desire should create a moral universal law. However, it is considered one of the ways to examine ethical dilemmas.

According to Kant's theory, in order for my false promise to be believable, I want everyone except myself to be truthful all the time.

In other words, this means denying the dilemma for myself, and asking myself a question: Is the dilemma that I intended to do is morally acceptable, in case it has become a law that applies to all human?

If my answer is No, that means self-defeating, and I refrain to do the dilemma, else I proceed to do the dilemma.

This is called the golden rule which means to treat others as you like to be treated (Immanuel Kant).

## 2.2 Principle of Utility

An action is good if its benefits exceed its harms, it is bad if its harms exceed its benefits. If you are intended to do a project, you have to find out the benefits and harms of the project, by giving a scale for the good and a scale for the worse. Then we have to examine the ascending scale and descending scale. If the scale is more than zero then the result is good, else worse result (Jeremy Bentham, John Stuart Mill).

## 2.3 Answering the research questions:

The main danger of AI to jobs is: Job Losses due to AI automation

As AI robots become smarter and more dexterous, the same tasks will require fewer humans. And while AI is estimated to create 97 million new jobs by 2025, many employees won't have the skills needed for these technical roles and could get left behind if companies don't upskill their workforces. Which leads to *Job Displacement*. (builtin.com).

A study by Rackspace Technology found one of the leading reasons for slow AI adoption is due to a shortage of skilled talent. According to Deloitte's State of AI in the Enterprise survey, 41% of respondents say an insufficient amount of technical skill in AI prevents them from scaling initiatives. Which leads to Skills Gap. (skillsoft.com)

It is also AI dangerous on disinformation, so generating fake news has become a prevalent issue in the digital age, with profound consequences on society, politics, and media. Due to an exponential increase in the use of unverified information, spread on social media by users with different backgrounds, a significant task facing natural language processing is real-time recognition of generated fake news.

the most dangers of AI in Disinformation concerns include: Automated Generation of Fake Content and Deepfakes, it can be challenging to tell the difference between real and fake material when it comes to text, photos, audio, and video content created by artificial intelligence (AI). It is possible to create persuasive propaganda and misinformation by using this ability (Discriminating AI-generated Fake News,2023).

On the economics systems side AI has an impact on increased wealth gap, so AI has the potential to contribute to economic inequality by disproportionately benefiting wealthy individuals and corporations.

Certain employment might be replaced by automation and AI-driven technology, especially those that involve repetitive, regular work. Employees in some industries may lose their positions as a result, thus a decline in the wealth gap. (linkedin.com)

When you step forward to make a system, you must adhere to your ethical responsibilities, so the responsibility of companies or individuals so that developing AI systems is to respect the intellectual property, if they intended to have their privacy data, they should ask for a permission first. otherwise, they should tack it by adding a copy write on it.

No one denies the Pros of open-source software that is:

*Software quality:*

Open-source code is often higher quality. A piece of software created by a team of developers can be lower quality than that developed by thousands of developers from all over the world with experience in different technologies, industries, and projects. (freecodecamp.org)

*Transparency:*

Everyone can look at the source code and change it to meet their needs, sharing with others who have the same needs they do.

*Customization*

There is a high level of customization and flexibility to meet your needs.

*Cost-Effectiveness*

It is ideal for people or small businesses that have smaller budgets since many software titles are free  
and Innovation and Rapid Development  
(rswebsols.com)

In spite of these features that we discussed before, there is a dilemma in building open-souse AI system because it is an intellectual property for other companies.

*Data privacy report:*

The report found that organizations' top generative AI concerns include data privacy and cyber issues (65%), employees making decisions based on inaccurate information (60%), employee misuse and ethical risks (55%) and copyright and intellectual property risks (34%). (securitymagazine.com)

According to Data privacy report, we are concerned about making the AI system open-source, Therefore, it is considered a danger from artificial intelligence on privacy.

The governments should invest in initiatives to measure and monitor various aspects of AI research, deployment, and impacts, including:

- Continuously analyzing deployed systems for potential harms, as well as developing better ways to measure the impacts of deployed systems where such measures do not already exist.
- Assessing the technical maturity of AI capabilities relevant to specific domains of policy interest.

Governments could use this measurement and monitoring infrastructure for a variety of purposes, including:

- Testing deployed systems to see if they conform to regulation.
- Incentivizing positive applications of AI via measuring and ranking deployed systems.
- More rigorous and coordinated approaches to impact assessment and assurance.
- Comparative analysis of the strength of countries' AI ecosystems.
- Prioritizing funding and incentivizing research.
- Early warning systems for sources of risk or opportunity

(WHY AND HOW GOVERNMENTS SHOULD MONITOR AI DEVELOPMENT, 2021).

### 3.conclusion:

Artificial intelligence is a double-edged sword, with pros and cons like any technological system.

Users must be made aware of how to deal with it.

Blocking technology like this is not an appropriate option, as its benefits outweigh its harms, and it could become a universal law, as discussed previously.

I recommend companies that intend to build an artificial intelligence system to make it legal with a GPL license.

## 4. references:

- 1) <https://builtin.com/artificial-intelligence/risks-of-artificial-intelligence>
- 2) <https://www.skillsoft.com/blog>
- 3) Trandabăţ, D., & Gifu, D. (2023). Discriminating AI-generated Fake News. *Procedia Computer Science*, 225, 3822-3831.
- 4) <https://www.linkedin.com>
- 5) <https://www.securitymagazine.com/articles>
- 6) <https://www.freecodecamp.org/news/what-is-great-about-developing-open-source-and-what-is-not>
- 7) <https://www.rswebsols.com/pros-cons-open-source-software>
- 8) Whittlestone, J., & Clark, J. (2021). Why and How Governments Should Monitor AI Development. *arXiv preprint arXiv:2108.12427*.