Report

Human Geography and Societal Needs (HS202)

Submitted by :

Department of Civil Engineering

Group 43

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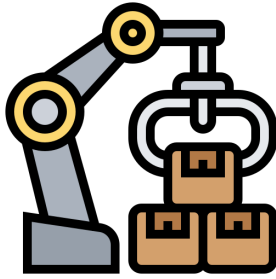
Content

1. Introduction :

AI, or artificial intelligence, refers to the development of computer systems that can perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation. AI algorithms are designed to learn from data and improve their performance over time, which allows them to adapt to new situations and make more accurate predictions.

AI has the potential to revolutionize industries and create new opportunities for growth and innovation. However, there are also concerns about the potential negative impact of AI on employment and society as a whole and the impact of AI on jobs is a topic of much debate. On one hand, AI has the potential to automate many routine and repetitive tasks, which could lead to job displacement for some workers. For example, AI-powered robots can perform assembly line tasks faster and more accurately than human workers, and the job of a cashier can be done way more efficiently.

2. What Jobs and Worker Tasks Are at Risk from AI?

Although earlier digital technologies automated occupations that were intensive in doing routine tasks (e.g., machine operators, office clerks), AI as a prediction technology has the potential of also automating various non-routine tasks across a wide range of occupations.

As AI automation is rapidly replacing jobs that were previously done by humans, such as manufacturing, transportation, and customer service, basically performing tasks that involve detecting patterns, making judgments, and optimizing.

The most-exposed occupations include clinical laboratory technicians, chemical engineers, optometrists, and power plant operators. More generally, high-skill occupations are most exposed to AI. Moreover, as might be expected from the fact that AI-exposed jobs are predominantly those involving high levels of education and accumulated experience, it is older workers who are most exposed to AI. There are also some low-skilled jobs that are highly exposed to AI. For example, production jobs that involve inspection and quality control are exposed. However, these constitute only a small proportion of low-skill jobs. Therefore , the working class having little to no education will be at risk of getting replaced as their work does not require much human skill which can not be replaced by AI.

Reference :
[Link](#)

3. Effect Of Labour Workers from AI

Rapid advances in artificial intelligence (AI) and automation technologies have the potential to significantly disrupt labor markets.

Regardless of their role, almost all workers will need to seek higher educational attainment and spend more time on activities that require social and emotional skills, creativity, cognitive capabilities and other skills that can't as easily be automated.

 The talk about artificial intelligence, machine learning and robotic process automation is scaring many but exciting just a few. These technologies appear to be aiming to replace some blue-collar workers and could soon do the same with white-collar workers.

<> We conducted a survey on labor workers in front of the sports complex in IIT Ropar

Some of the questions were :
1 . Do you know what is AI
2 . Do you know the advancement of AI in the recent years

The Answer from all of the labor workers was that they don't know about AI And they couldn't care less about it.

Most of the less educated labor workers don't care about the job market shift that would occur and are totally unaware of it .
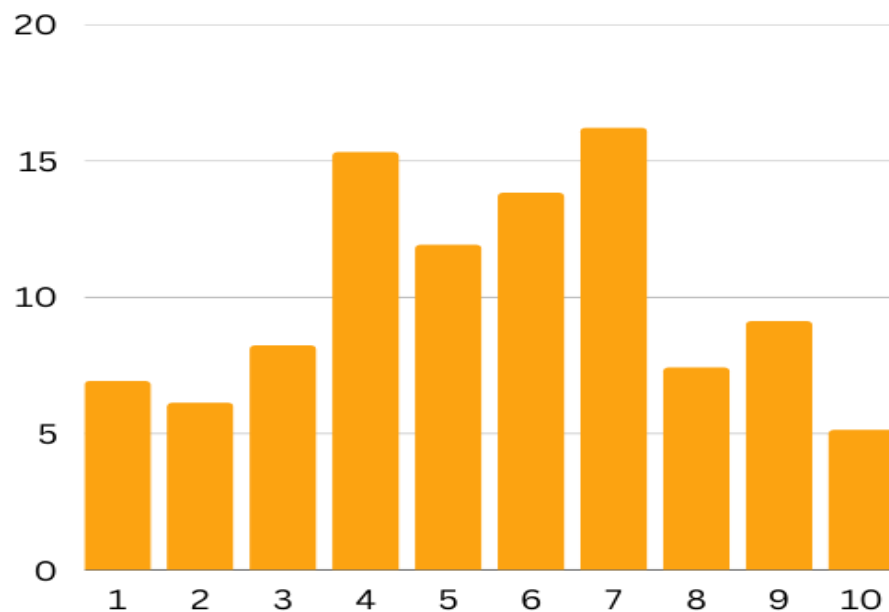
Solution:

1 . Public Welfare Schemes :
Public welfare schemes could provide a safety net for workers who have lost their jobs due to AI and automation. These schemes may include programs that offer job retraining and placement assistance, unemployment benefits, and financial assistance for basic needs such as housing and healthcare.

2 . Rehabilitation Centre

Rehabilitation centers can offer a range of services to workers, such as group and individual counseling sessions, cognitive-behavioral therapy, and career coaching to help workers cope with the emotional and psychological impact of job loss. These centers can also provide job search and placement assistance to help workers transition into new careers.
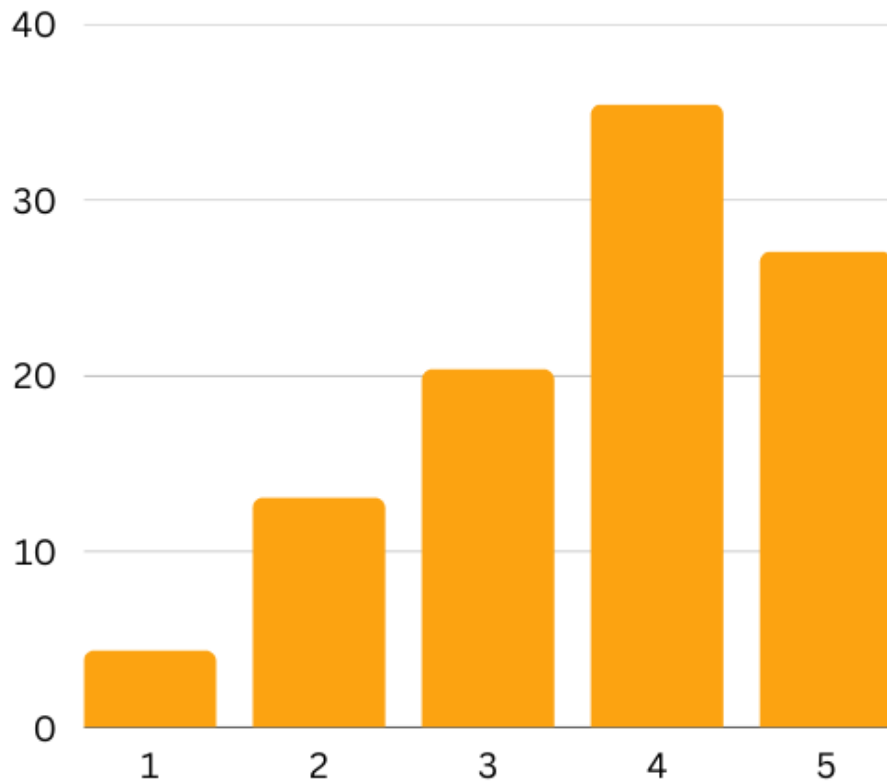
Below it the graph of the survey taken from students of IIT ROPAR on :-
How will rural people respond to the shift in the job market due to AI?

4. Current Education System in era of AI :

To begin with topic of education in AI , lets see how aware are students with AI , as shown is our survey:

Different people have different opinions on the current education system in the era of AI . **It's a topic of debate whether the education provided at the institutions is still relevant or not now , as with the evolving technology , our education system has not changed at the same pace**. If ways of learning are not developing according to the present era, it's still more like traditional education , then undoubtedly AI will take over our jobs , because AI is learning at a higher rate than us .
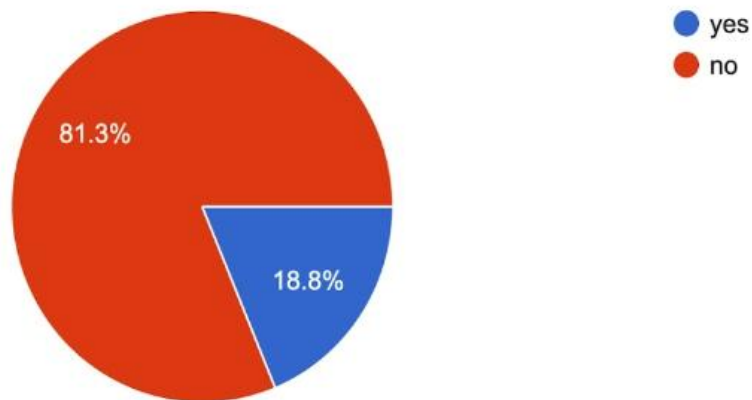
One argument in favor of the current education system is that it provides a solid foundation of knowledge and skills that are still relevant in the era of AI. For example, subjects such as math, science, and language arts are still important for building critical thinking and communication skills, which are essential in any career. Additionally, many argue that the humanities, such as history and philosophy, provide students with a broader perspective on the world that is essential for being a well-rounded and informed citizen.

However, others argue that the current education system is not preparing students for the changes that are coming with AI. They argue that the focus on rote memorization and standardized testing is outdated, and that we need to focus more on skills like creativity, problem-solving, and adaptability. Additionally, there is a growing demand for skills in areas like data science and artificial intelligence, which are not traditionally taught in most educational programs.

Ultimately, the question of whether the current education system is still relevant in the era of AI is a complex one that does not have a clear answer. While there are certainly aspects of traditional education that are still valuable, there is also a need for innovation and adaptation in order to prepare students for the rapidly changing world of AI.

We have surveyed many people about the same , our question is that :

The current education provided at colleges are useful for career in the era of ai

○ yes
● no

81.3%

18.8%

How will the education system need to be changed , for maintaining your jobs presence in the era ofAI ?

These are some of the responses of our survey we conducted on students of our college .

1 . I think that today most colleges teach useless curriculum in today's world. We need to advance more.

2 . Students should be trained how to innovate rather than training for monotonous work

3 . They have to focus on the practical things.

4 . Colleges should focus more on this field and teach children more about it.

5 . I think we should be taught how to use new AI technologies that are coming up.

6 . Indian education needs to be changed completely. How we are going to dwell in this era of AI when even bringing mobile phones is not allowed in school.
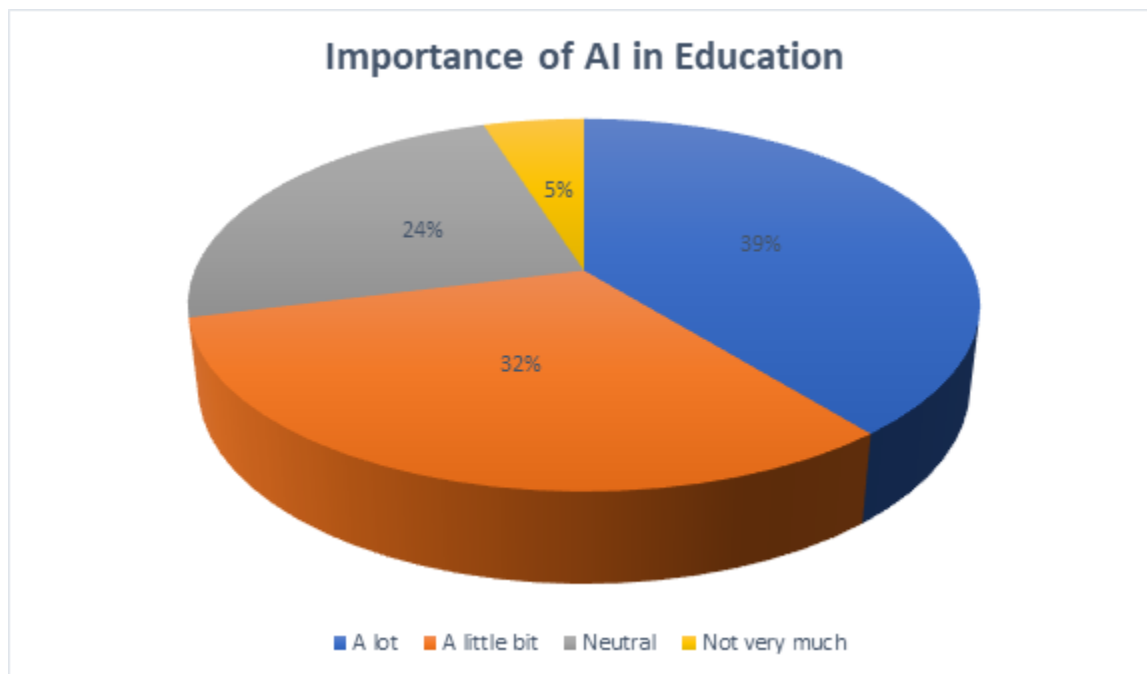
7 . by advancing the level

8 . Working on the more logical aspects of things as AI is just based on data we feed it, and hence is not really that compatible with logic building things.

9 . New courses need to be set in reference to AI

10 . Creativity, Innovation are better done by humans rather than AI. So, education system should be more focused on improving these kind of mindsets

And much more responses from the public !

Importance of AI in Education

- A lot — 39%
- A little bit — 32%
- Neutral — 24%
- Not very much — 5%

So , to maintain the relevancy of your work/job in the era of AI , one of the primary or first solutions that comes to our mind is to constantly improve yourself or upskilling yourself with the help of AI .In simple words , you need to be adaptable with changes in the world .

Well this will not work for people who are uneducated or don't have enough knowledge , but we we can implement it for future generations , as we provide knowledge to every child , in which we can teach like practical skills , like problem solving , communication , writing , etc , so that they can be enough capable to adapt the changes .

5 . Many articles also say they same , about adaptability for AI like :

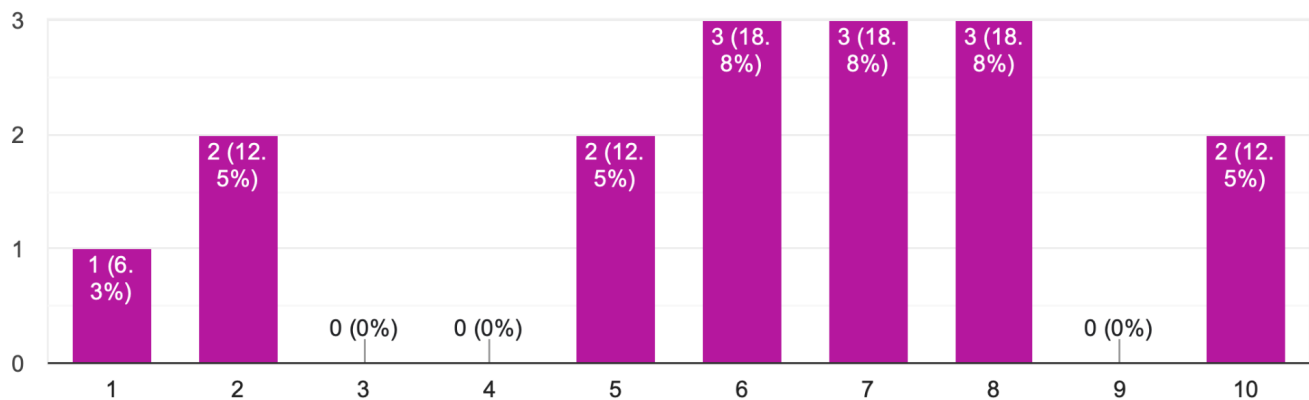# "Adaptability Is Key To Survival In The Age Of Digital Darwinism"

Charles Darwin said in *On the Origin of the Species* that it's not the strongest or most intelligent of the species that survives but the one that's most adaptable to change.

Link to the article: link

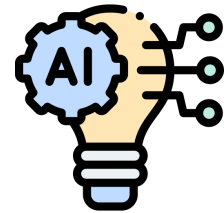We surveyed for the same about how confident you are to adapt changes

How confident are you in your ability to adapt to changes in the job market brought about by AI and automation?

16 responses

However ,data shows our college students are confident enough to adapt to the changes .Well students are easily able to adapt changes for AI. The main problem is for those in the workforce whose work is not highly skilled , or those who aren't still aware about it .

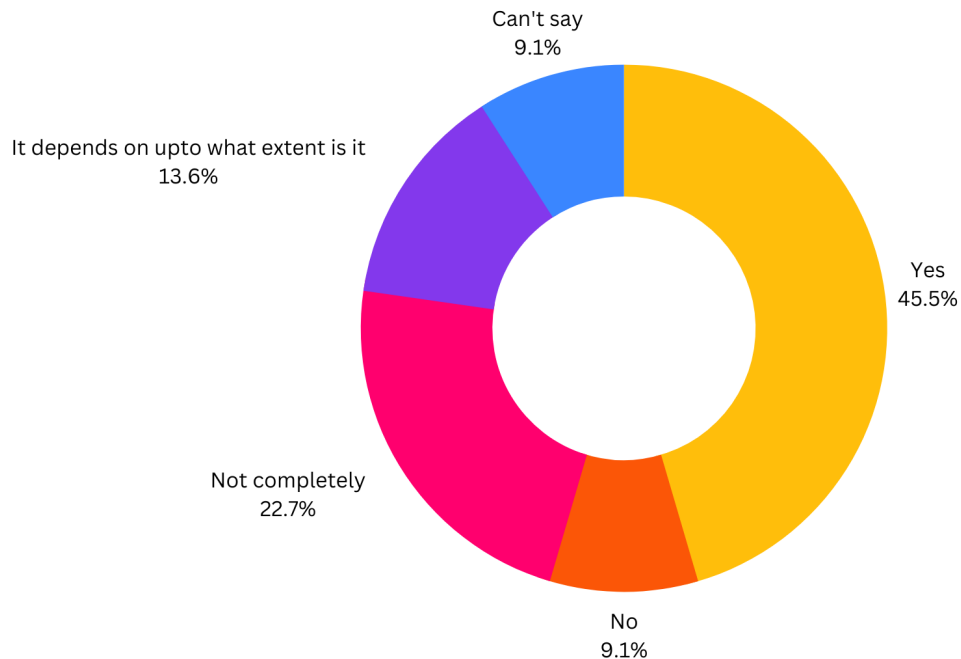# -> Many researchers say , AI will overall boom the economy of world ,

However, AI may also have a highly disruptive effect on the economy and society.

Well so many factors define the economy , proper research has been done on it .

Link for research paper : research

As we surveyed regarding it , data shows about mixed opinions :

Do you believe that AI will ultimately have a net positive or negative impact on the job market and the economy as a whole?

Can't say
9.1%

It depends on upto what extent is it
13.6%

Yes
45.5%

Not completely
22.7%

No
9.1%

The first problem that comes to our mind is about automation of labor work , so , companies and organizations will use automation , as machines can work at a faster rate , more accurately , and cost effectively . In short , **machines can work considerably faster and more effectively.**

Lets see what the general public thinks about automation in industries , in place of workers .

How do you think that companies and organizations can balance the potential benefits of AI with the potential risks to workers and society as a whole?

1. In my view development of AI will just result in shifting the job domain. Just like when the telephone comes people throw the letter system in the trash. And if it wasn't so we all were in rekt in the present era. Companies should train their employees to use the

   available AI tools to simplify their work. And I think AI can never replace the human brain completely.

2. By telling people that taking risks in the field of AI is going to give excellent results and this technology can really do wonders.

3. Companies will see their benefits

4. They would be benefited if the monotonous works are replaced by AI but if they give them even superior position they might have a negative impact

5. Making AI do the mechanical and menial tasks in areas that require high skilled labor. And for areas that require low skilled labor, AI can't really serve any purpose at least according to me, that won't eat up the jobs of the laborers.

6. I think companies will not adapt AI as of now. But after 10 or 15 years they will adapt to AI. Because AI is not so advanced as of now such that it provides exact code and has debugging skills.

What are the solutions to these problems ?

Balancing the potential benefits of AI with the potential risks to workers and society requires a careful and thoughtful approach. Here are some suggestions on how companies and organizations can achieve this balance:

1. Ethical considerations: Companies should have a clear understanding of the ethical considerations involved in AI development and use. This includes issues such as bias, privacy, transparency, and accountability.

2. Human-centric approach: Companies should adopt a human-centric approach to AI development, which means putting people first and ensuring that AI is designed to augment human abilities rather than replace them.

3. Collaboration and communication: Companies should collaborate with experts in AI, workers, and stakeholders to ensure that the development and use of AI align with social and ethical values.

4. Upskilling and reskilling: Companies should invest in upskilling and reskilling their workforce to prepare them for the changing nature of work brought about by AI. This will help ensure that workers are not left behind and can take advantage of new opportunities.

5. Regulatory compliance: Companies should ensure that they comply with relevant regulations and standards for AI development and use. This will help mitigate risks and ensure that the benefits of AI are maximized.

In summary, balancing the potential benefits of AI with the potential risks requires a holistic approach that considers ethical, human-centric, collaborative, and regulatory aspects. By doing so, companies can ensure that the development and use of AI are aligned with social and ethical values, and that the benefits are shared by all.

6. Conclusion

Thus, during the course of this project, we aim to :
1.
Identify the jobs that are at risk due to the advancement of Artificial Intelligence .
2.
Trying to analyze the effect caused by Artificial Intelligence on different sectors .
3.
Analyze the data collected from the survey .
4.
Propose the possible solutions .