**Perception of students towards Artificial Intelligence: A study in Uttarakhand**

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**Abstract**

The study investigates into the perceptions of Artificial Intelligence (AI) among undergraduate students, exploring how attitudes, awareness, and expectations within the young minds are evolving. Given the pervasive influence of AI across various aspects of contemporary life, comprehending how future professionals perceive this transformative technology is imperative for both educational institutions and policymakers. The study is designed to investigate the general awareness of AI concepts, their applications, and the perceived impact on different industries capturing nuanced sentiments and revealing potential correlations with academic disciplines, career aspirations, and exposure to AI-related coursework. The information was gathered using a questionnaire consisting of 20 statements. A total of 50 undergraduate students were included in the analysis of data from Govind Ballabh Pant University of Agriculture and Technology, Pantnagar. Initial findings unveil a diverse range of perceptions among students. While some express a strong interest in the potential societal benefits of AI, others voice concerns about ethical implications, job displacement, and the broader societal impact. The study also covers the perception of AI and related tools and their influence on real-world situations, influencing students' attitudes, and shedding light on the changing education domain. As the findings emerge, the implications for educational institutions become evident. It becomes apparent that customizing AI education to address student concerns, dispelling misconceptions, and fostering a nuanced understanding of the technology is essential for preparing the next generation of professionals. Additionally, the study underscores the significance of integrating ethical considerations into AI education to equip students with the knowledge and tools required to navigate the evolving landscape responsibly.

**Keywords -** Artificial Intelligence, students, Perception, Education

**Introduction:**

Artificial Intelligence (AI) has seen a growing presence in our daily lives, encompassing a wide range of applications such as personal assistants, purchase recommendations, smart homes and cars, fraud detection, online customer support, and even assistance in personal relationships. This increased integration is powered by the utilization of machine learning, computer modelling, and algorithmic development, leveraging progressively larger datasets**. (Khare et.al., 2018).** Artificial intelligence (AI) stands for the emulation of human intelligence processes by machines, particularly computer systems, a term first coined by John McCarthy in 1956. This field encompasses the study of intelligent machines and software capable of reasoning, learning, knowledge gathering, communication, manipulation, and perception of objects. **(Kandpal, A.S et al., 2023).**The goals of AI extend across various industries, from finance to healthcare, where it is increasingly contributing to advancements and innovation Notably, AI has garnered significance in educational technology, management sciences, and operational research areas, social media emphasizing its transformative role in diverse fields.Current internet trends visualize the growing digital access of the young generation over social media around the world turning it into a global village social media plays a crucial role in fostering connections and interactions among peers, thereby enriching the college integration and learning experience. **(Shukla and Vijay, 2018).** In contrast to merely serving as a source of entertainment and interaction, social media has evolved into a valuable tool for acquiring diverse and up-to-date information in the lives of students. Present research investigation is an attempt to study the perception of students towards AI techniques.

**Research Methodology:**

Present research investigation was conducted in GBPUA&T, Pantnagar. The investigation involved gathering responses from 50 students, with the data being acquired through a questionnaire designed and distributed via Google Forms. The survey was conducted to understand the perception of undergraduate students (B.Sc. AG 1st year) over AI and its applications and usage. For study the general information a schedule was developed and for utilization of AI tools by the students were assessed on 20 statements developed by Sameena (2023).

**Table1: Socio-economic characteristics of respondents**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Characteristics** | **No.** | **Per centage** |
| **1.** | **Age** |  |  |
|  | Young (17-19) | 30 | 60 |
|  | Middle (19-21) | 20 | 40 |
| **2.** | **Gender** |  |  |
|  | Male | 20 | 40 |
|  | Female | 30 | 60 |
| **3.** | **Medium of Schooling** |  |  |
|  | CBSE | 37 | 74 |
|  | ICSE | 5 | 10 |
|  | State Board | 8 | 16 |
| **4.** | **Device for accessing internet** |  |  |
|  | Mobile | 40 | 80 |
|  | Tablet | 1 | 2 |
|  | Both | 9 | 18 |
| **5.** | **First Usage of AI based tools** |  |  |
|  | Assignment | 27 | 54 |
|  | Exploration | 13 | 26 |
|  | Hobby | 5 | 10 |
|  | Other | 5 | 10 |
| **6.** | **Awareness Related to AI and application in agriculture** |  |  |
|  | Aware | 20 | 40 |
|  | Somewhat | 23 | 46 |
|  | Not | 7 | 14 |

**Socio-Economic characteristics of respondents**

**Age**- Data regarding the age of students clearly shows that the majority (60%) lies between 17-19 age group while 40% lies between 19-21 age group.

**Gender-** It is evident from table 1 that majority of the students were female (60%) followed by male (40%).

**Medium of** **Schooling-**Out of the total students, 74% were from CBSE schools, 16% from State boards and 10% from ICSE schools.

**Device used for internet access-** The data shows that majority of students (80%) used mobile phones to access internet followed by Tablet (2%) and both (18%)

**First usage of AI based tools-** Around( 54%) of students came to know about AI while doing there assignments, (25%) came to know through exploration( 10 %) used it as hobby, and other (10%) by some other sources.

**Awareness about Artificial Intelligence-** Among the total respondants (53%) students were fully aware of AI, while (38%) had basic awareness and about (5%) were sparingly aware.

**Awareness of using AI in Agriculture –** Around 40% knew the application of AI in Agriculture, (46%)were little aware and rest (14%)were not aware.

**Table 2: Utilization of AI tools by the students**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.No.** | **Characteristics** | **Strongly Agree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **1.** | AI will play a significant role in shaping the future of various industries. |  |  | 5 (10%) | 23 (46%) | 22  (44%) |
| **2.** | AI technologies have potential to improve everyday life. | - | 3(6) | 10 (20%) | 33 (66) | 4(8) |
| **3.** | College education should include courses that cover AI application.- | **-** | - | 6(12%) | 25 (50%) | 19 (38%) |
| **4.** | AI might hinder human interactions and personal connections in education system. | **-** | 4(8%) | 11(22%) | 23 (46%) | 12 (24%) |
| **5.** | AI allow us to reach information at a highly convenient manner. | - | - | 9 (18%) | 25 (50%) | 16 (32%) |
| **6.** | Encountered AI applications in daily life. | - | 10 (20%) | 11(22%) | 24 (48%) | 5 (10%) |
| **7.** | AI can provide new economic opportunities for country. | - | 5(3%) | 10 (20%) | 28 (56%) | 9 (18%) |
| **8.** | Ethical concern related to AI should be taken seriously. | - | - | 11 (22%) | 23(46%) | 16 (32%) |
| **9.** | There should be regulation in place to govern the development and use of AI. | - | - | 8 (16%) | 24 (48%) | 18 (36%) |
| **10** | Imapct of AI on society should be a topic of public discussion. | - | - | 7 (14%) | 26 (52%) | 17 (34%) |
| **11** | Use of AI systems would ease the learning process in education system. | **-** | **-** | 4 (8%) | 25 (50%) | 11 (22%) |

**Utilization of AI tools by the students**

1. **Shaping the future:** AI will play a significant role in shaping the future of various Industries.The majority of respondents (44 percent) strongly agreed with this statement followed by (46 percent) who agreed with the statement and (10 percent) goes with a neutral opinion.
2. **Improvement in everyday life:** AI technologies have the potential to improve everyday life. A large part of respondents (66 percent) agreed with this statement, however only (8 percent) of respondents strongly agreed with the statement (6 percent) chose a neutral opinion, and (6 percent) disagreed with the statement.
3. **Inclusion of AI related courses:** College education should include courses that cover AI applications: A majority of respondents (50 percent) agreed with the statement followed by 38 percent strongly agreed with the statement and only (12 percent) chose to stay neutral over the statement.
4. **Hindrance in personal interaction:** AI might hinder human interactions and personal connections in the education system. Total 8% percent respondents were disagreed with the statement, whereas 22% percent chose to have a neutral opinion, while 46% students were agreed to the matter and finally 24% respondents were strongly agreed with the above statement.
5. **Convenience:** AI allows us to obtain information in a highly convenient manner. Total 18 percent respondents stated neutral opinion however, 50 percent respondents were agreed with the statement and 32 percent respondents were strongly agreed with the statement.
6. **Daily life inclusion :** Students encounter AI in their daily life. The majority of students (48%) agreed with the statement followed by 22% were neutral and 20% disagreed. 10% respondents were strongly agreed with the statement.
7. **Economic aspect:** AI can provide new economic opportunities for the country.The majority of students (56%) agreed with the statement followed by 20% respondents were neutral, 18% respondents were strongly agreed and 3% respondents were disagreed.
8. **Ethics:** Ethical concerns related to AI should be taken seriously. Majority of respondents (46%) agreed with the statement followed by 32% respondents were strongly agreed and 22% respondents were neutral.
9. **Governance:** There should be regulations in ways to govern the development and use of AI.The majority of students were agreed (48%) followed by (36%) who strongly agreed with the statement and 16% respondents were were neutral.
10. **Social impact:** The impact of AI on society should be a topic of public discussion. In this majority of students (52%) agreed with the statement followed by 34% respondents who were strongly agreed and 14% with a neutral opinion.
11. **Education:** The use of AI systems would ease the learning process in the education system: The majority of students (50%) agree followed by (22%) strongly agree and (8%) are neutral.
12. **Privacy/Security:** Tools like Chat GPT will be a threat to privacy in the online world. The majority of students (44%) agree followed by (22%) strongly agree, (6%) neutral.

1. **Technological advancements:** Technology in the field of the internet will bring a positive change: The majority of the students (50%) agreed with the statement, 36% of students were neutral and 14% respondents were strongly agreed with the statement.
2. **Behavioural Change:** AI brings about a behavioural change in society. About (22%) of students were strongly agreed, while 28% of respondents were neutral, and the majority of students i.e., 50% agreed with the statement.
3. **Cognition:** AI will impact the cognitive learning and thinking skills of humans. The majority of students (70%) agreed with the statement, while 20% strongly agreed and 10% of them had neutral responses.
4. **Environmental Change**: Technological advancements would have a positive impact on the environment. The majority of the students were neutral (16%) with the responses, while 30% agreed, 16 % disagreed and 14% strongly agreed with the statement.
5. **Data Safety:** AI will further strengthen the digital life of users and ensure data safety. The Majority of the students (40%) agree with the statement, (34%) students are neutral, (16%) disagree and 10% respondents were strongly agree with the statement.
6. **Marketing:** CHAT GPT and another AI based platform would revolutionize the marketing industry. The majority of students (60%) were agree with the statement, whereas 18 % respondents were strongly agree and the 22% percentage of the students are neutral with their responses.
7. **Multi-Dimensional influence:** CHAT GPT and other AI based platforms would influence people's thoughts over issues such as politics, gender bias, and societal differences. The majority of the students (40%) agree with the statement, 48% respondents were neutral and (12%) strongly agree with the statement.
8. **Relevance:** The information available over CHAT GPT and other AI based platforms is relevant. Some of the students (16%) agree with the statement, 40% are neutral 16% were strongly agree with the statement.

**Conclusion:**

After a critical analysis over the responses recorded over the 20 questions that were being present as apart of understanding the perception of AI on undergraduate students, we concluded that a majority of respondent were optimistic regarding AI and its future expectations that seems to revolutionize the society and the nation all together. However, the respondent drew a sign of attention that should be given over the ethical issues, data protection over internet, security, concern over legal issues and its negative impact on environment. Over-all the outlook of society especially the younger generations are positive towards the newly developed technologies and expect fruitful results in upcoming years .

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