

## USE OF AI TO TACKLE PROBLEMS IN AGRICULTURE

The Ministry of Agriculture and Farmers Welfare in India has employed Artificial Intelligence (AI) methods to address various challenges in the agricultural sector to aid farmers. 'Kisan e-Mitra' an AI-powered chatbot to assist farmers with queries about the PM Kisan Samman Nidhi scheme. This solution supports multiple languages and is evolving to assist with other government programs. National Pest Surveillance System for tackling the loss of produce due to climate change. This system utilizes AI and Machine Learning to detect crop issues, enabling timely intervention for healthier crops. AI based analytics using field photographs for crop health assessment and crop health monitoring using Satellite, weather & soil moisture datasets for rice and wheat crop. This information was given by the Union Minister of Agriculture and Farmers' Welfare, Arjun Munda in a written reply in Rajya Sabha.

## Budget-Welfare with Fiscal Discipline

■ PIYUSH GOYAL

This year's interim budget proposals will accelerate India's journey towards becoming a developed country by 2047 with Prime Minister Narendra Modi's proven approach of sabka saath, sabka vikaas sabka vishwas, sabka prayas and the special emphasis on Garib, Yuva, Annadata and Nari. Finance Minister Nirmala Sitharaman should be applauded and congratulated for this.

Welfare with Fiscal Discipline - What is truly remarkable about the growth-oriented interim budget's announcements is that generous, targeted welfare measures along with a historic increase in capital expenditure and massive work opportunities and employment generation will go hand in hand with fiscal responsibility and discipline.

This is great news for the economy because welfare schemes and provision of basic necessities of roti kapda aur makaan leaves more money in the pockets of beneficiaries, which they spend on various products and create demand in the economy.

It is important to note that fiscal discipline and macroeconomic stability remains the focus even at a time when the nation is preparing for general elections. Globally, most investors brace for fiscal recklessness when a country heads for elections, because governments often ignore fiscal discipline and resort to reckless populism.

Investors applaud - The Modi government is different. Its strict adherence to fiscal discipline ensured that despite the twin shocks of the pandemic and Ukraine crisis, India emerged as the bright spot in the turbulent world as it combined care and compassion with sensible economics. This year's budget announcements are in the same spirit.

The investing community recognizes this. This is reflected in global interest in doing business with India. India's stock markets also reflect the enthusiasm of investors. India's stock market recently overtook Hong Kong to become the world's fourth-largest with a valuation of \$4.33 trillion.

No 1 all the way - Capital expenditure has been raised by 11.1 percent to a historic high of Rs11,11,111 crore. This will further improve and modernize India's infrastructure, which is already dramatically better than what it was 10 years ago.

Higher capital expenditure and implementation of large projects will create numerous opportunities for our youth.

Modi Guarantee - Prime Minister Modi has correctly observed that this year's budget is guaranteed to strengthen the foundation of India's path towards becoming a developed country by 2047. The key part of this journey is the empowerment of the poor by setting ambitious targets, achieving them and then having even bigger aspirations.

This is evident in the Modi government's achievement and aspiration in building homes. The government has already built more than four crore houses for the poor in villages and cities. The government has now set a target of building another two crore homes for the middle class.

Women-led development - Similarly, the target of creating 2 crore Lakhpati Didis has been increased by 50% to three crore. ASHA and Anganwadi workers will also get the benefit of the Ayushman Bharat Scheme. The government has also empowered women with 30 crore mudra loans. Enrolment of women in higher education has increased 28% in the past decade. In education, women constitute 43 percent of students in Science Technology, Engineering and Mathematics (STEM) courses, which is among the highest in the world.

For better healthcare, the Finance Minister has announced that the government will encourage vaccination for girls in the age group of 9-14 years, demonstrating the caring and compassionate governance of Prime Minister Modi. For synergy in implementation, various schemes for maternal and child care will be brought under one umbrella.

Middle-class gains - In line with the government's strategy to make life easier for people and prevent harassment, the budget announced the new income tax scheme that will provide relief to one crore people. This is a welcome change from the past when previous government had kept this huge sword hanging over the heads of the common man for decades. The middle class will also gain from improved infrastructure and the expected sharp increase in job creation.

Golden era for youth - India's youth have the most to gain from Prime Minister Modi's vision of making India a developed country by 2047. The budget has emphasized the importance of youth and announced measures to help them with employment opportunities, support for start-ups, and provisions to enhance innovation.

The Finance Minister rightly said that for India's tech-savvy youth, this will be a golden era. The government will establish a corpus of Rs 1 lakh crore to give interest-free loans for 50 years. It will encourage private companies to scale up research and innovation. The Finance Minister highlighted the importance of programmes that combine the powers of India's youth and technology.

Clean and Green - The Modi government is also focused on clean and green development. The budget takes a giant leap in this direction. The Rooftop Solar Scheme will help one crore families get free electricity. What is more, people will earn up to Rs 20,000 by selling excess power to the grid. It will also provide opportunities for entrepreneurship.

In many ways, PM Modi has launched the era of sunshine after centuries of struggle. The budget is an important milestone, laying the foundation of a strong, self-reliant, and confident nation- Viksit Bharat 2047.

Life is like a game of cards. The hand you are dealt is determinism; the way you play it is free will.

-Jawaharlal Nehru

## Empowering Rural Youths through Agripreneurship

■ DR. BANARSI LAL

India has the largest population of youth in the world. According to 2011 census, more than half of the Indian population is under the age of 25 years and 65 per cent is under the age of 35 years. More than 75 million youths worldwide youths are looking for work according to UN International Labour Organisation (ILO).Any development agenda cannot be possible without participation of youths. Young people are the innovators, builders, creators and leaders of future. But they can transform future only when they have proper education, skills, decision making ability, good health etc. Agriculture is the prime source of livelihood for majority of population in hilly Union Territory of Jammu & Kashmir. This beautiful UT is dominated by small size of landholders who have limited resources. The interest of youths of J&K is declining in agriculture due to various reasons. By adopting the new ideas, technologies and concepts youths can be the ideal catalyst to make agriculture more profitable. The migration of rural people to urban areas is around 45 per cent out of which 30 per cent are youths. Through commercial agriculture many employment opportunities for the rural youths of Union Territory of J&K can be created. There is need to promote agripreneurship in the Union Territory of J&K J&K to generate interest and confidence among the rural youths of J&K. Agribusiness sector has the potential to contribute to a range of social and economic developments such as employment generation, poverty reduction, income generation, improvement in food nutrition and overall food security. New strategy is needed to support new agripreneurs to succeed in running their farms and agribusinesses. The Indian Council of Agricultural Research (ICAR) has initiated Attracting and Retaining Youths in Agriculture (ARYA) scheme to realize the importance of rural youths in agricultural development. It was initiated in 2015-16 in 25 districts of India. Presently it is implemented through Krishi Vigyan Kendras (KVKs) in 100 districts of

India. The main intention of the scheme is to turn agriculture and allied sectors into an attractive and profit making proposition for the rural youths. It helps to attract and empower the rural youths to take up various agriculture and allied services sectors enterprises for sustainable income and gainful employment. It helps to demonstrate functional linkages with different institutions and stakeholders for convergence of opportunities available under various schemes/programmes for sustainable development of youths.KVK, Reasi and Kathua are also implementing this scheme in Jammu province of J&K and special efforts are being made to attract, engage and retain youths in agriculture through the development of different enterprises to check the migration of rural youths to urban areas and create employment in rural areas. Awareness/orientation programmes are initially conducted at village level to sensitise individual youths/SHGs/NGOs etc. Under this scheme youths of 18-35 years of age are selected for the development of essential enterprises. Specific trainings on particular enterprises are organised for the rural youths to make them agripreneurs.

Youths are our greatest asset. Youths have creative minds and are capable of achieving seemingly impossible tasks such as monsoon management, climate change adaptation, mitigation and enduring malnutrition. Average size of land holding in the Union Territory of J&K is small as compared to national average. Hence, group cooperation is important to harness the value of scale both in the production and post-harvest phases of farming. Rural youths can play a significance role in shaping the future of agriculture. There is need of agri-business centres and agri-clinics centres on a big scale. Farm schools need to be established in the fields of young farmers so as to promote the farmer-to-farmer learning. Value addition in agriculture is needed in order to increase the income and employment. New agricultural technologies need to be introduced after careful consideration of risks

and benefits so that their adoption rate can be enhanced.

Youths are the primarily productive human resource for socio-economic development of the nation. Thus, there is need to divert their role in mainstream development. J&K youth is diverse in ethnicity, religion and socio-economic backgrounds. Such diversity necessitates customized initiatives to meet the needs and activate their untapped potential. There is need to work on biotechnology, biodiversity, ecotechnology, food security, education and information and communication technologies. The strategic and participatory research, capacity building, networking and partnership building should be adopted including the principle of social inclusion in access to technologies which further can enhance the income and conserve natural resources. The research and outreach strategies need to be devised to bridge the rich-poor and gender divides in the areas of information, knowledge and skill empowerment. There is dire need to make agriculture more attractive and rewarding for the younger generation through the introduction of innovative technologies.

Agriculture is the prime source of livelihood for majority of rural population in the Union Territory of J&K. Agriculture is the backbone of J&K. Till now agriculture continues to be at the mercy of the monsoon. J&K is dominated by the small land holders. It is imperative for the nation to produce food not only to feed its population but also for an equal number of livestock. Rural youths in J&K are losing interest in agriculture. Youths can change the status of agriculture by adopting new ideas, concepts and technologies in agriculture. It is fact that if farmers work in the field, the non-farmers are able to eat. The agriculture sector has the potential to provide numerous employment opportunities in food production, marketing, processing, retail, input sales, research and extension etc.in Union Territory of J&K. There is need to work

towards the goal of sustaining and aiding youths engaged in agriculture. Presently rural areas in the Union Territory of J&K today are undergoing a phenomenal transformation. The government subsidies for mechanization of agricultural fields have brought on a renaissance, changing the face of J&K villages and farmers. Many villages in J&K are endowed with rich resources to cultivate cereals, vegetables, fruits, pulses and oilseeds. It is imperative to make agriculture a lucrative and profitable occupation in order to increase the number of youths in agriculture. Income and employment among the rural youths can be increased by combining hard work with modern technologies. Youngsters can play a major role in conserving the natural resources. Climate change is the burning issue and avertable disasters are creating havoc everywhere. Technologies needs to be technically accessible, culturally acceptable and environmentally feasible. There is need to create opportunities in seed/planting material industry for the young generation of J&K. We need to have a high-yielding/hybrid seeds and proper seed inputs for better returns. Availability of quality seeds must be ensured for seasonal crops. Value added technologies, warehousing and storage/cold storage facilities for the agricultural commodities should be provided to the rural youths. Rural youths of Union Territory of J&K can tap the opportunities of natural farming and organic farming and produce safe and healthy food as J&K has the potential for these practices. Through these practices they can generate more income and employment for themselves. Information and Communication Technologies (ICTs) forecasting mark situations can also help rural youths tremendously. Rural youths of J&K need to be educated on export chances and stress on Farmers Producers Organisations (FPOs) needs to be given for this purpose.

(The writer is Sr. Scientist & Head of KVK, Reasi).

## Union Budget 2024-old wine in new bottles

■ OMKAR DATTATRAY

Finance minister of India Nirmala Sitharaman has presented new union budget in parliament on first February 2024 and it is the last budget of the NDA center government as the general elections are coming near and are round the corner. Sitharaman equaled the record of former Prime minister and finance minister Moorji Desai who has presented six budgets in succession .Finance minister Nirmala Sitharaman presented her sixth consecutive budget a government expenditure for first four months of head of the upcoming parliamentary elections .This pre-election budget ,technically a vote on account seeks parliament's approval for an advanced grant to cover essential government expenditure for first four months of the new fiscal year starting in April. The budget is of Rs 47.66 lakh crore and is six percent higher than financial year 2023.The citizens pined great hopes on the budget but they were disappointed because the budget in question is a cosmetic exercise and has nothing new for the public and at the most it can be called as the old wine in new bottles and so general public is worried about the new budget .There is no relief for the middle income group and for salaried people as the income tax slabs have been kept unchanged .The salaried class hoped that some sops will be there for them but at the end of the day there is nothing for the fixed income group .The only satisfaction is that the income tax slabs have been kept unchanged .There is dire need to increase the income tax slabs and also the need to increase the standard deductions .But this concern of the people has not been addressed. There is

nothing new in the budget for the pensioners .While the cost of living and inflation is steadily rising, the pensioners are facing economic penury and the Budget is silent on the pensioners .Inflation has made the life of common man miserable and the Budget should have made provision to tackle the problem of steeply rising prices of the goods and services .People of the UT had high hopes from the interim budget ,but they has disappointed them. As expected ,there was not much about price rise or job creation .So there was not much that came out of the budget .The price rise is still high ,the joblessness in this country is at an all-time high .Nothing was discussed in the budget which the common man or poor will feel happy about .It is just a budget and playing with the numbers only .People were expecting a change from this budget because inflation is high .The people were expecting some relief ,but unfortunately there is no change .Leaders of INDIA have said that there is nothing in the union interim budget for poor ,women and youth ,while calling it a new 'jumla' .Delhi minister Atishi told ANI , "The budget proves that this is a Jumla government .Prime minister Narendra Modi has said in 2014 that he would provide 2 crore jobs every year but not even one crore people got jobs .Today ,they have given a new jumla that they will provide 55 lakh jobs .She said no step has been taken to reduce inflation . The interim budget has poured cold water on the expectations of the people .The interim budget 2024 increased capital expenditure and announced projects for rail infrastructure ,SHG,s The budget 2024 focused on fiscal consolidation ,infra ,agri ,green growth and

railways .However ,no changes were made in the tax rates ,which is a disappointment to the salaried individuals .While no changes were seen in the tax regime in this budget ,the FM announced that over the last 10 years ,tax collections have more than doubled .In a disappointment for the common man and the middle class salaried taxpayers ,no changes in income tax slabs or income tax rate were made in the budget 2024.However congress MP Shashi Tharoor said,' 'Not very much out of it .There were a lot of rhetorical language and very little concrete on implementation .Sitharaman said , "She talked about a number of things which couched in vague language like hope ,expectation and the like but nothing in practical terms has been provided in the interim budget .Reacting to the interim budget ,the BJP's principal opposition congress has said the budget did not have much to say .Congress leader Adhir Ranjan Chowdhury said, "The union budget cannot and does not indicate any policy decision .But the way the government has presented the budget ,it clearly suggested the policy the government .It is an interim budget and cannot reflect any policy matter of the government. "Congress MP Karti Chidambaram called interim budget a , "Mere administrative exercise to ensure the government of India has the requisite funds to carry its normal business until the new parliament is constituted . "That is what they have done' ',the son of former finance minister P Chidambaram said, adding , "Except for making their obligatory self congratulatory .self praise phrases ,nothing else is there and nothing

should have been there and rightly so .Nothing is here' '.Jammu and Kashmir based National conference chief Farooq Abdullah said the actual budget will come in July. "We hope the people will benefit ,tourism will increase ,industries will grow and nation will progress. "Abdullah said Priyanka Chaturvadi , a member of parliament for Uddhav Thackeray faction of Shiv sena said that the union finance minister has done is to pour water on the expectations of people in the cold weather .As per AAP ,MP Swati Maliwal , "This is a disappointing budget .Inflation and unemployment are at peak in the country but there is nothing in the budget about it .It is a disappointing budget for the common people . "Opposition dubs India's pre-election budget 2024 disappointing and says there is no mention of inflation and unemployment .Soon after her presentation ,opposition leaders came down heavily on the government ,with some of them using terms like' 'hallow " and' disappointing 'to describe the last budget presented by the finance minister in the second term of prime minister Narendra Modi .Kerala chief minister Pinarayi Vijayan said that despite persistent calls for enhancing fiscal federalism ,the budget remained silent on many of Kerala's demands .Several declarations appear poised to exacerbate impoverishment and inflation ,posing a significant threat to the livelihoods of millions .To conclude it can be said that the interim budget 2024 is merely an exercise to showcase numbers and it can be said to be old wine in new bottles.

(The author is a columnist, social and KP activist).

## Can Artificial Intelligence Replace Human Intelligence?

■ VIJAY GARG

Artificial intelligence (AI) used to be something we've all heard of but didn't exactly understand or know its real-life applications. But, as free and easy-to-use AI tools like ChatGPT, Midjourney, or Whisper AI become available online, a new AI era has begun. Now, users can generate copy, long content, images, presentations and even websites using simple commands and instructions. It's mind blowing!

But, as it's natural, many wonder; "Can artificial intelligence replace human intelligence?" The short answer is no. AI cannot replace human intelligence entirely. While AI can perform certain tasks more quickly and accurately than humans, it lacks the same level of general intelligence, creativity, and social understanding humans possess. In this blog, we will explore what AI is, its limitations and its possibilities.

What is AI?

Before we dive into the question of whether AI can replace human intelligence, let's first define what we mean by AI. At its core, AI is a technology that enables machines to perform tasks that would typically require human intelligence, such as recognising patterns, making decisions, and processing natural language. AI is often powered by machine learning algorithms, which allow the system to learn and improve over time.

While AI has been around in some form for several decades, recent advances in computing power and data analysis have led to a rapid acceleration in AI development. Today, AI is used in various applications, from self-driving cars to virtual personal assistants.

The Limits of AI

But, despite AI advances and possibilities, it's important to remember that there are limits to what it can do. One major limitation is that AI is

only as good as the data it's trained on. If the data is biased or incomplete, the AI system will reflect those biases and limitations.

AI is also incapable of true creativity or innovation. While AI can generate new ideas and solutions based on existing data, it cannot think outside the box and create original ideas. This is because AI is based on algorithms and patterns, whereas human creativity is driven by intuition, inspiration, and imagination. Therefore, AI can be a valuable tool for augmenting human ingenuity but can never replace it.

Additionally, AI is not capable of empathy or emotional intelligence. While AI can recognise and analyse emotions, it can't truly understand them or respond to them in a meaningful way. This means that AI can't replace human relationships or social interactions, as these require a deep understanding of human emotions and behaviours. Therefore, while AI can be a powerful tool for many applications, it's important to remember that it's not a substitute for human intelligence, empathy, and creativity.

The Potential of AI

Despite its limitations, AI has enormous potential to transform many industries and solve some of the world's biggest challenges. As Andrew Ng, co-founder of Google Brain and founder of deeplearning.ai, puts it

"It is difficult to think of a major industry that AI will not transform. This includes healthcare, education, transportation, retail, communications, and agriculture. There are surprisingly clear paths for AI to make a big difference in these industries."

AI can help us make more informed decisions by analysing vast amounts of data and identifying patterns and trends humans might miss. This can be especially useful in healthcare and finance,

where making accurate predictions and diagnoses can have life-changing implications.

But perhaps one of the most important use case of AI is that it can help us automate repetitive and mundane tasks, freeing up time and energy for more creative and meaningful work. This can improve efficiency and productivity in many industries, from manufacturing to customer service. Additionally, AI can enable us to create new products and services that were previously impossible by combining data and insights in new and innovative ways. Overall, the possibilities of AI are vast and exciting, and we have only scratched the surface of what this technology can do. The Importance of Human Input While AI has enormous potential, it's important to remember that it's not a silver bullet. AI systems require human input and oversight to perform appropriately and make decisions in ambiguous situations.

Ultimately, AI is not a replacement for human intelligence, it's a tool that can help us achieve our goals, but we need to ensure that we use it responsibly and ethically.

Furthermore, humans bring a wide range of experiences, creativity, and intuition to the decision-making process that AI cannot replicate. While AI can process vast amounts of data and identify patterns that humans may miss, it cannot replace the value of human intuition and creativity in decision-making.

It's important to understand that AI isn't a replacement for human intelligence. It's an extension of it. It can help us to make better decisions and to be more productive, but it can't replace the value of human intuition and creativity.

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The Future of AI and Human Intelligence

So, what does the future hold for AI and human intelligence? AI will likely continue to advance and become more sophisticated, enabling it to perform an even wider range of tasks. However, there will always be tasks and problems that require human input and creativity. Human intelligence will always be a part of fields that require skills like research, design, strategic planning and more. Roles that require human relationships, decision-making, intuition and emotional intelligence, such as Physicians, Teachers, HR professionals and Business Leaders, can't be automated. Still, AI will make them more productive and effective.

In conclusion, while AI has enormous potential to transform many industries and improve our lives in many ways, it cannot replace human intelligence entirely. While AI may be able to perform specific tasks more quickly and accurately than humans, it lacks the same level of general intelligence, creativity, and social understanding that humans possess. Therefore, the most effective and responsible approach to AI is to view it as a tool to augment human intelligence rather than a replacement for it. By doing so, we can unlock AI's full potential while preserving the value of human input and creativity.

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