



International Journal of Advance Studies and Growth Evaluation

Top Class Institutes from India are Working Hard for Development of Smart India

*¹ SS Arsad

*¹ Department of Physics, Shri Shivaji Sci. College, Amravati, Maharashtra, India.

Article Info.

E-ISSN: 2583-6528

Impact Factor (QJIF): 8.4

Peer Reviewed Journal

Available online:

www.alladvancejournal.com

Received: 16/May/2026

Accepted: 20/June/2026

Abstract

Bhashini is a new app which is developed for understanding digital services in local languages for local people. With the help of various IITS in India a useful technology is being developed with new innovations and innovative tools are being prepared for day to day use of human being. Various IITs of India is contributing its part for development of modern India. Specifically in the field like agriculture, automobile, space research, robotics, drone technology, cancer diagnosis, unmanned vehicle development, green energy, etc. fields. Reformation in modern education system with AI, Reduction of carbon emission by 50%, 90% Semiconductor chips supply within the country, Local made Robo for home health check-up are few innovative scientific innovations which IITs are providing for making India great.

*Corresponding Author

SS Arsad

Department of Physics, Shri Shivaji Sci.
College, Amravati, Maharashtra, India.

Keywords: Drone technology, diagnosis, unmanned vehicle

Introduction

Theory and Discussion

Various resources of Bhashini are used on more than 800 platforms. It supports thirty six written languages, 23 sound languages, and more than 35 international languages. Two to three crores of AI are being processed every day. Students are understanding the concepts very easily. Farmers are asking difficulties and are getting ready answers. Physicians are interacting with the patients in a homely manner.

IIT Delhi with Indian railway and metro network AI based SCADA (Supervisory control and data acquisition) is developed. This special app is useful for Indian railway for checking the rail route, fault detection and other useful part of wagons, goods carriages, cranes, passenger bogies, wires carrying electric supplies for an Indian railways.

IIT Kharagpur has prepared a Robo-farm for agriculture. With the help of this Robo-farm a non-visible threat of fungus, virus, microorganisms on the agriculture crops can be identified and the recommended insecticides, fungicides, pesticides can be spread (i.e. showered with the help of drone technology) with modern automation. With the help of powerful cameras, virus, fungus, bacteria, other micro-

organisms attacking the crops can be identified and accordingly the fertilizer or pesticides, weedicides and other farm-medicines can be used to control the pest or harmful micro-organisms which destroys the crops.

In the field of energy, IIT Delhi has prepared a useful technology which is based on the technology of transformation of coal to methanol, in which a useful coal can be transferred into the methanol as a green energy source.

IIT Delhi is also studying the heat wave resistive mechanism and a model is being developed which will be useful to fight with ill effects of heat wave.

IIT Delhi with collaboration of All India institute of medical Sciences, New Delhi, are preparing a cancer detection system which is useful for mammography image analysis, in which a breast cancer can be identified in its initial stages (early stage) and their spread can be depressed. Mouth cancer and cancer of stomach can be identified. Blind and injured person can be treated with the help of various useful instruments which IIT Delhi has developed and it is working upon its manufacture.

IIT Madras with the help of silicon valley in USA has established world class research centre in which the Indian technology with new and innovative starts-ups can be taken to

the various World Trade centres and business centres in which Indian start-ups give useful help and coordination so that they can invest in international market and Indian start-ups will be having greater health market for their future prospects.

IIT Kharagpur with the help of new incubation start up prepared unmanned or driverless ground Robots vehicle. This vehicle can be driven without driver in which two modes are being given for the operating range of the special type of vehicle. Initially it is up to five kilometres range and AI can drive a vehicle which can carry heavy weight up to five hundred kilogram.

IIT Kharagpur is focusing its research on health screening. The health screening is becoming so easy that a patient didn't have to go to a city and with keeping this view in mind, a low cost AI that is artificial intelligence device is being manufactured with name Hemo-QR in which one paper strip and a mobile camera can be easily used to detect anaemia, so that on school level or an Anganwadi level this tests are now possible. A new device known as PrePAPQR is manufactured for women for home test health check-up.

Using this technique a woman can give initial tests for survival health and can go for routine cervical health test for herself so the privacy of herself can be maintained and the detection of the disease can become possible. Portable TV device is also been prepared by scientists in IIT Kharagpur which is very useful for detecting tuberculosis and also for oral cancer. Torch like light device is being prepared which can identify oral cancer. This oral cancer device is being validated for clinical test and already prepared for licences.

IIT Madras by using *bodhan* AI that is *bodhan* artificial intelligence is preparing and a AI based bot which will be provided to each and every student of IIT Madras which will explain every concept to the individual student. IIT Madras is preparing a future plan to education a teacher especially so that a lesson plan, book screening and student tracking will become very easy and convenient for them in coming 2 to 3 years.

Shakti microprocessor program which is India's own microchip is being prepared in Gujarat. It is 28 nanometre fabrication Plant. A large fabrication plant is being built within coming two to three years. Indian demand of 90% cheap semiconductor chips will be fulfilled by this plant in India itself, so India will become self-reliant and self-sufficient as far as semi-conductor technology is concerned. The classroom teachers with classroom techniques will be trained by using this innovative means.

IIT Delhi is working in environment health Care and the commercial food-chain cycle project in which public distribution system is efficiently used by utilizing artificial intelligent technique. The traffic and transportation expenses will be saved by 25%. Man and robot will work together (known as Co-botics) and new system is being developed in which medical robotics delivery of medicine and robotics surgeries are involved. By using this techniques, human treatment of various diseases will be easy, very cheap and affordable.

In the field of environment LC3 green cement is developed by IIT Delhi which is 50% less carbon free emission and greenhouse gases will be saved. Very strong trial is being taken in 25 countries and the rural development of India project is also being implemented. IIT Delhi is also working on medical robotics portable ECG and medical equipment which are totally Indianized known as Bhoo-Prahari (watchdog of mother earth)

Conclusion

In the next stage, Bhashini is all set to prepare multilingual Audiobooks, live transcriptions. It is working on real time translation tools. Rural people can easily communicate and can ask questions to AI. Future made in India is being reshaped using new innovations which premier educational institutions like IITs are initiating for making India great. Even the private educational institutions are now far behind in race of development of new machines, working models, prototypes, new vehicles which are user friendly, less energy consuming and high mileage range.

In the field of agriculture, defence, medicine, healthcare, energy, start-ups and therefore in the very near future India is going to become an organisable and recognizable force in the emerging new world or technology.

References

1. News Desk, 'in six new fields IITs are creating new future for new generation technology, their respective directors are disclosing the new innovations on the eve of National Technology Day', National technology day, special report by daily Bhaskar's Marathi daily Divya Marathi, entitled May. Akola edition, 2026, 1.
2. Reporter, 'three IITs directors are disclosing the new innovations on the eve of National Technology Day', National technology day, special report by daily Bhaskar's Marathi daily Divya Marathi, entitled, may. Akola edition, front, 2026, 1
3. Times of India reports, 'Humans made in factories? Yes, Lab-made genomes are within reach. Are we okay with that? Midfield 'SHORT TAKES ON BIG IDEAS'', daily Times of India article, Nagpur edition, editorial page, Saturday May 16, 2026, 8.
4. Reporter, 'Bhashini: AI based tool has reached in most of villages in regional languages, the new innovations on the eve of National Technology Day' National technology day, special report by daily Bhaskar's Marathi daily Divya Marathi, entitled. Akola edition, 2026, 7.
5. Editorial, 'Neural Network of Restraint and Introspection', The speaking tree daily Times of India article, editorial page, Nagpur edition, Saturday May, 2026, 8.
6. Editorial, 'Quantum of solace, daily Times of India article, editorial page, Attempt the absurd achieve the impossible', Nagpur edition, Saturday May, 2026, 8.
7. News Desk, 'Australian company builds five giga watt capacity data centre with IITs', Divya Marathi network, New delhi front page, Akola edition, Saturday 6th June, 2026, 1.
8. News Desk, 'Seventy nine percent smart phone users are facing in difficulties in call drop on highways. CMR survey', Divya Marathi network, New delhi, Akola edition Saturday 6th June, 2026, 11.
9. News desk, 'Health science: small good habits can change your mind health', Akola edition Divya Marathi network, New Delhi, Saturday 6th, 2026, 1.
10. News desk, 'New trends with AI, an era of solo preneurs', Akola edition, Divya Marathi network, New Delhi, Saturday 6th June, 2026, 6.
11. News desk, 'Education field will have to focus on decision capabilities, prof. Bharat Bhaskar, Director-IIM Ahmedabad Daily Bhaskar' a, Marathi daily which is a Bhaskar group news-paper, Akola (Maharashtra) edition front page Sunday 21 June, 2026.

12. Prof. Rajat Muna, News desk, 'Technology would answer properly but it's a human that will answer correctly,, Director-IIT Gandhinagar, Ahmedabad Daily Bhaskar a, Marathi daily which is a Bhaskar group newspaper, Akola (Maharashtra) edition. Front page Sunday 21 June, 2026.
13. Special news, 'Dell XPS 13 laptop developed for fighting Apple's mac book neo smart laptop with collaboration with IIT', Divya Marathi network, New Delhi, Saturday 6th June, 2026, 1.
14. Editorial, 'Words and pictures, Attempt the absurd editorial page, daily Times of India article', editorial page, Nagpur edition, Saturday May 16, 2026, 8.
15. Editorial, 'India takes the leap, L&T reports, daily Times of India article', editorial page, Nagpur edition Saturday May 16, 2026, 5.
16. Editorial, 'Eating meat without killing animals, Midfield 'SHORT TAKES ON BIG IDEAS', daily Times of India article, editorial page, Nagpur edition, Saturday June 6, 2026, 12