

NEWSLETTER

JUNE 2022



TIH
iHub Drishti

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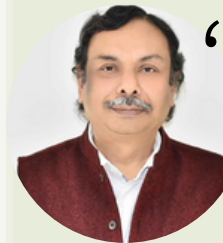
About Us

The TIH at IIT Jodhpur, named iHub Drishti, focuses on building cyber-physical systems for computer vision, AR and VR. It is a Section-8, Not-for-profit Organization promoted by and at the Indian Institute of Technology Jodhpur under an NM-ICPS of the Government of India. The hub, steered by the Hub Governing body and the Board of Directors of TIH, will host teams of faculty members, research scholars, developers and scientists who will work towards developing the technologies. The TIH envisions creating an ecosystem in and around the thematic areas and building collaborations with other TIHs to foster CPS technologies' overall growth and development. The facility would include a mix of office and laboratory spaces with state-of-the-art infrastructure facilities that will cater to the collaborating institutions. The TIH will also build a network of researchers and developers, both externally hired and from the student body.



“I am delighted to announce the first edition of iHub Drishti, IIT-Jodhpur newsletter. I hope that this initiative of Technology Innovation Hub (TIH) will yield many favorable outcomes for the scientific and technological community at large and will build revolutionary products for humankind. I wish the principal investigators of the various projects, the staff, and everyone associated with iHub Drishti all the best for the exciting journey ahead.”

- Prof. Mayank Vatsa
Project Director



“I am happy to see the growth of iHub Drishti. This first edition of newsletter is the testimonial of remarkable achievements of the Hub. The Hub orchestrated and delivered indigenous products and solutions in response to the pandemic in the quickest possible time as part of the RAKSHAK (Remedial Action, Knowledge Skimming, and Holistic Analysis) initiative of DST. The hub is confident to accomplish all the objectives of the National Mission on Interdisciplinary Cyber Physical System in terms of technology development, entrepreneurship development, Skilling and Training, and International Collaboration.”

- Prof. Santanu Chaudhury
Chairman

VISION

"To become the most coveted self-sustaining technology destination in CV, AR and VR in the country, with a nationwide footprint, nurturing and supporting cutting edge research and innovative technology deliveries through Startups, MSMEs and direct execution of projects."

MISION

iHub Drishti will:

- focus on advancing the research outcomes in core problems related to CV and ARVR,
- augment imaging with additional (multimodal) sources of input such as haptics, language, and IoT to advance the state-of-the-art in the domain areas,
- create technology solutions for socially relevant and industry-facing problems,
- support and nurture start-up ecosystems,
- stimulate skilling and reskilling educational programs, and
- advise governments on appropriate policy-related matters in the domain of CV, and AR & VR.

Our Key Products



CAMPUS RAKSHAK

A product bouquet comprising of technically astute components to cater:

- A badging system that enables the real-time implementation of interventions.
- The App that builds an anonymous contact graph, which can aid contact tracing.
- A novel smart pooling scheme to quantitatively screening and can provide considerable savings in screening costs.
- Simulator that tracks the spatial movement of agents which enables rich visualization of activity on campuses.

CLIENTS



SMART HEALTH SOLUTION FOR RAPID MASS SCREENING USING INTEGRATED TELEMEDICINE FOR HOMECARE

Monitoring SpO2, heartrate, temperature of human body. Web and Android Application for video conference and chat support. The telemedicine solution supports in Hindi, Bangla, English. Deployed at: IIT Jodhpur PHC, A village in sundarban area, WB, Unnat Bharat Abhiyan

AI-BASED PLATFORM TO MONITOR AND IDENTIFY SMELL, TASTE AND KEY COVID-19 THERAPEUTIC HOTSPOTS

The invented smart device is used for the detection of loss of olfactory function. Different scents are used to determine the loss of smell which can be used to pre-screen various viral diseases like Covid.

LAKSHMAN REKHA

AI-Biometric-Driven Smartphone App for Strict Post-COVID Home Quarantine Management. Lakshman Rekha is a prototype app for post- COVID quarantine management consisting of two modules- the front-end apps and the proposed HQM back-end. There are two front-end apps: one for administration to perform user registration and other for the patient quarantine management. The proposed HQM system utilizes a biometric pipeline for implementing the quarantine.

SOCIAL DISTANCE ALERT

A wrist band for covid- based on RFID and bluetooth technology

Databank

4 datasets have been created under RAKSHAK Program:

- Chest CT scans data of Indian COVID 19 patients
- Speech and Coughing Breathing Sound Data
- Radiology Data for SARS nCov-2
- 5 Lung Diseases Chest X-Ray Dataset

Competitions and Conferences

- Co-hosted IEEE International Conference on Automatic Face and Gesture Recognition 2021
- Co-hosted ICVGIP2021
- Meta-Learning for Computer Vision Workshop at AAAI2021
- Fair, Data-efficient, and Trusted Computer Vision Workshop at CVPR2022
- Co-organized SRS 2022. It was a two-day event organized with the collaboration of ACM student chapter IIT Jodhpur.
- In collaboration with Prithvi.ai (Industry Partner) organized a Hackathon for undergrad students.

Manpower Development

School of AI and Data Science, IIT Jodhpur, in collaboration with TIH iHub Drishti Foundation, has launched M.Tech. in Augmented Reality and Virtual Reality (AR & VR) for the Working Professionals for the Semester commencing in the session 2022-23, which is probably the first-ever M.Tech. course in AR & VR. Accomplishing the upskilling target, we are also supporting M.Tech. Executive AI program.

100+

Job
Creation

42

Projects

20

Technologies
Developed

23

Publications

5

IP

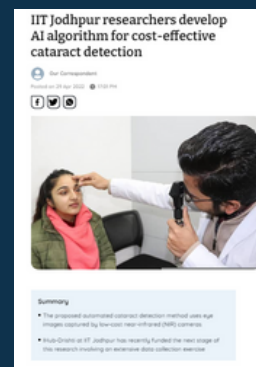
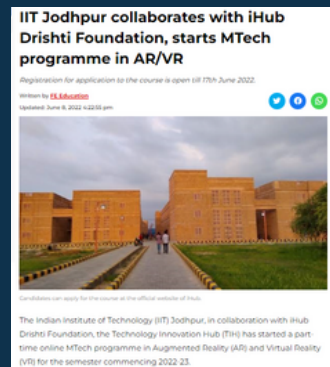
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Fellowship

326

Manpower
Developed

iHub Drishti in News



SIRO

iHub Drishti recognised as Scientific & Industrial Research Organization (SIRO) by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India

Process Excellence

Established a governance framework through Vertical Coordination Committees comprising of eminent members from different Institutes and Industries across the country. Designed a Project management policy related to protocol and procedure for Research/Program funding. Set up process for Honorary and Industry Membership - over 40 members in iHub Drishti Foundation.

iHub Drishti with other 5 hubs recognized

Readout of President Biden's Meeting with Prime Minister Modi of India
MAY 24, 2022-STATEMENTS AND RELEASES | The White House Release



The U.S. plans to join six of India's Technology Innovation Hubs to support at least 25 joint research projects in 2022 in areas such as artificial intelligence and data science to advance progress in applications such as agriculture, health and climate. The U.S. National Science Foundation and Department of Science and Technology of India will deepen this cooperation through the new U.S.-India Initiative on Critical and Emerging Technology.

Robust Company Policies- Key Enablers

- Purchase Policy
- HR Manual
- Project Management Policy
- IP Policy

Revenue/External Funding

Formulated revenue generation model: co-development, translation and revenue sharing model for externally funded projects and product commercialization - generated INR 1.4 Crs.

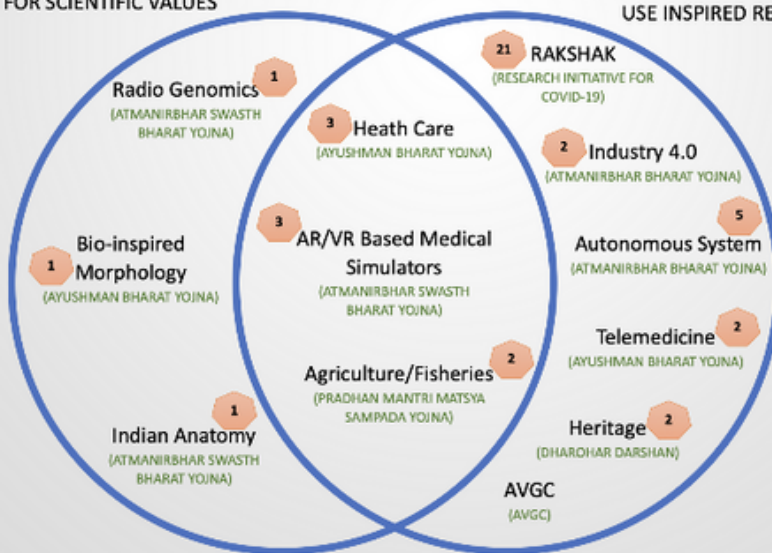
Values

- Stay Calm
- Plan and Optimize actions to achieve targets
- Execute actions meticulously and ethically
- Promote collaboration within and outside the organization

Research Portfolio

RESEARCH FOR SCIENTIFIC VALUES

USE INSPIRED RESEARCH



“As the world aims to improve its physical reality through virtual means, TIH at IIT Jodhpur strives to create an ecosystem that will put India at the forefront of research and innovation in Mixed Reality. Let us all innovate- for Science, for India, for the planet, and for humanity.”

- **Manas Bairagi**
CEO

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