

Hackathon Synopsis

Theme: Preventive Healthcare & Public Health Intelligence

National Healthcare Innovation Hackathon for UG & PG Students

India's healthcare ecosystem is witnessing rapid transformation; however, the country continues to face major challenges related to preventive healthcare, disease surveillance, public health governance, and early health intervention. A large portion of the population still seeks medical attention only after diseases become severe, resulting in increased healthcare costs, hospital burden, delayed treatment, and avoidable mortality.

Simultaneously, public health systems often operate reactively due to fragmented health data, lack of predictive intelligence, delayed reporting mechanisms, and limited integration between healthcare providers, community health workers, laboratories, and governance systems.

The growing prevalence of lifestyle diseases such as diabetes, hypertension, cardiovascular disorders, mental health issues, malnutrition, and communicable diseases demands a shift from treatment-oriented healthcare to preventive and predictive healthcare ecosystems. Rural and underserved populations continue to face limited access to health awareness, screening facilities, health monitoring systems, and timely medical consultation. Furthermore, disease outbreaks, epidemic management, vaccination tracking, environmental health monitoring, and healthcare resource planning require real-time public health intelligence and data-driven governance mechanisms.

In this context, the Hackathon invites UG and PG students from universities and technical institutions across India to develop innovative, scalable, and technology-driven solutions addressing the challenges of preventive healthcare and public health intelligence.

Participants are expected to leverage emerging technologies such as Deep Learning, Machine Learning (ML), IoT, Data Analytics, Mobile Applications, GIS, Wearables, Cloud Computing, Blockchain, and Digital Governance frameworks to create impactful solutions for community healthcare transformation.

The Hackathon challenges participants to design systems capable of:

- early disease prediction and risk identification,
- Intelligent preventive healthcare advisory,
- smart health monitoring and wellness tracking,
- epidemic and outbreak prediction systems,
- maternal and child healthcare monitoring,
- vaccination intelligence and tracking,
- public health dashboards for governance,

- Digital intelligent rural healthcare support,
- mental wellness and emotional health monitoring,
- healthcare resource allocation intelligence,
- digital community health ecosystems,
- citizen-centric health awareness platforms,
- and real-time public health surveillance systems.

Participants are encouraged to propose practical and affordable solutions that can be implemented at community, district, state, and national levels. Special emphasis should be given to rural healthcare accessibility, multilingual healthcare support, low-bandwidth digital ecosystems, and inclusive healthcare technologies suitable for underserved populations.

The Hackathon aims to foster innovation, interdisciplinary collaboration, startup thinking, and socially impactful technological interventions that can contribute towards building an intelligent, preventive, inclusive, and digitally empowered healthcare ecosystem for the future of India.

Vision Statement

“Transforming healthcare from reactive treatment to intelligent prevention through innovation, technology, and public health intelligence.”