







# FORENSIC HACKATHON

13<sup>th</sup> April, 2025

**ORGANISED BY:** 

NATIONAL FORENSIC SCIENCES UNIVERSITY



Scan the QR code FOR REGISTRATION



VIGYAN BHAWAN, DELHI



aifsc@nfsu.ac.in aifsc.nfsu.ac.in







# ABOUT NATIONAL FORENSIC SCIENCES UNIVERSITY

National Forensic Sciences University (erstwhile Gujarat Forensic Sciences University) was established by the Government of India through Act, 2020 (32 of 2020) on 1st October 2020 and also accorded the status of an "Institution of National Importance". Established under the aegis of the Ministry of Home Affairs, Government of India, the objective of NFSU is to promote forensic science in conjunction with applied behavioural science, law, criminology, and other allied areas and technologies. University has headquarter located at Gandhinagar, Gujarat and other campuses at Delhi, Goa, Tripura, Bhopal, Dharwad, along with academies at Pune, Guwahati, and Manipur and an International Campus at Uganda. Through thirteen Schools, nine Centres of Excellence, and state-of-the-art infrastructures, NFSU is producing skilled human resources for the different domains of forensic investigation and promoting research and innovation. Being as world's first and only forensic university, NFSU is also providing consultancies and imparting training to different stakeholders of the criminal justice delivery system thus strengthening the forensic capabilities globally.





# ABOUT FORENSIC HACKATHON

The National Forensic Sciences University (NFSU), an Institution of National Importance, is dedicated to advancing research, innovation, and education in forensic sciences and allied disciplines. With its unwavering commitment to fostering indigenous technology and aligning with the vision of the 'Make in India' mission, NFSU plays an important role in promoting cutting-edge research and development. The university fosters innovation by connecting diverse sectors and creating solutions that align with India's evolving forensic and technological needs.

In line with this vision and India's growing position as a global hub for innovation, NFSU is excited to announce the Forensic Hackathon scheduled for March 21, 2025. India has the 3rd largest start-up ecosystem in the world, with around 20,000 start-ups, 4,750 of which are technology-led. This impressive status is bolstered by a range of government initiatives such as the Atal Innovation Mission, PM Research Fellowships, Start-up India Abhiyaan, Aatmanirbhar Bharat, and the SAMRIDHI scheme, which play a crucial role in positioning India at the forefront of innovation.

This event aims to catalyse positive transformations in crime investigation practices by promoting competition and collaboration among key stakeholders, including Central and State Forensic Science Laboratories, academic institutions, and industries engaged in forensic tool analysis and manufacturing. By uniting these diverse participants, the Forensic Hackathon aspires to generate innovative solutions and enhance the effectiveness of forensic science in tackling contemporary challenges faced by law enforcement agencies and enhancing the criminal justice system.

## **FUNDING**

SEED MONEY

1st spot Winner



**SEED MONEY 2nd spot Winner** 

₹ 1,00,000 /-

₹ 2,00,000 /-





## **THEMES**

#### I. FORENSIC BIOLOGICAL SCIENCES

- On the spot identification of source of biological fluids (saliva, semen, urine etc.).
- Exact age estimation of a person.
- Development of kits for age estimation of biological fluids for forensic application.
- Development of X-STR/Y-STR/Autosomal Kits indigenously.
- Portable DNA Analysis Devices.
- Development of cost effective and reliable instruments particularly for crime against women.
- Development of Forensic Microbial Profiling for Body Fluid Identification.
- DNA methylation analysis device for individual identification.
- Identifying Multiple Individuals from Mixed DNA Samples.
- Metagenomic Profiling for Environmental Forensics.

#### II. FORENSIC CHEMICAL SCIENCES

- Methods for detection of metabolites of drugs (including spurious drugs/ date rape drugs/ club drugs) and poisons of forensic concerns.
- Detection strategies for Arson residues and accelerant identification.
- Rapid tests for detection of explosive residues from explosive scenes, warfare, terrorism activities, etc.
- Novel methods for detection of adulterants and contaminants from medicines and food commodities.
- Computational-toxicology using bio-informative tools for the prediction and counetring mass poisoning cases.
- Methods for detection of Poisons and contaminants of emerging concerns from biological fluids/environment.
- Kits for rapid identification of animal/plant poisons from environment/ biological fluids.
- Development of android based image processing mobile application for determination of geographic origin of drugs of abuse based on intermediate reaction reagents & adulterants residues.

#### III. FORENSIC ELECTRONICS/PHYSICS

- Development of mobile phones event log analysis tool.
- Tool to identify the second party IP address in the WhatsApp call using IPDR analysis.
- Tool Geo identification of SIM card in VoIP calls and messages.
- Tool CCTV image enhancement using AIML technology.
- Tools for the Identification of deepfake images and videos.
- Capturing and data retrieval from rouge drones.
- Development of software for recovery of overwritten/deleted files from CCTV/DVR/ Hard Disk.
- Computerized approach for decrypting data from encrypted disk partition.

#### IV. FORENSIC PSYCHOLOGY

- Neuro-Psycho-Behavioral profiling of criminals Assessment of criminal behavior and its future predictability.
- Police/Army Psychology: Recruitment, their stress management and intervention.
- · Rehabilitation modules for Juveniles.
- Prison Psychology: Development of Counseling, intervention, coping skills and improving subjective well-being training and rehabilitation program for prisoners/Jailor/relatives of prisoners.
- Psychological Challenges in Schools/Colleges: For prediction of violent behavior among students, suicidal tendencies, bullying in children.
- Challenges for NGOs: Counselling and to develop rehabilitative modules for victims of domestic violence and rape, child rights, child custody, divorce cases etc.





#### **REGISTRATION FEES**

**PER TEAM** 

₹ 1,000 /-

#### **Registration Fees Includes:**

- · Welcome kit.
- Free participation in all sessions, coffee breaks and working lunch during the conference event.

#### **WHO CAN PARTICIPATE?**

- Students from all over India.
- Professionals (Forensic Scientists, Technocrats, Police, Judiciary, Potential Entrepreneurs) based in India.

#### **TEAM COMPOSITION**

Maximum 2-3 members in a team.

- The team of 'students' should include at-least one currently enrolled student in an educational institution of India.
- The team of 'professionals' should include at-least one currently employed or associated person with any governmental or private organisation based in India.
- There can be a team comprised of both student(s) and professional(s) but one of them should be a currently enrolled student or a currently employed professional.

#### FOR REGISTRATIONS



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#### **IMPORTANT DATES**

Last Date for Registration: March 25, 2025

Last Date for Submission of Proposal: March 25, 2025

Acceptance of Proposal: March 27, 2025 Presentation of Proposal: April 13, 2025 Declaration of result: April 15, 2025

**VENUE:** 

### **VIGYAN BHAWAN**

Maulana Azad Road, South Block, Delhi 110011

E-mail us at **aifsc@nfsu.ac.in**For more information visit aifsc.nfsu.ac.in