

1. Background and Context

Advanced Internet Operations Research in India (AIORI) is an Internet Engineering and Measurement platform. The purpose of AIORI is provide macroscopic insights into Internet infrastructure, behavior,



Internet Engineering and Measurement Platform

- Started in 2019 & Currently in Second Phase
- 300+ Measurement Anchors,
- 10+ Testbed Cluster in IITs, IISc, and Private Engineering Institution
- Single Window Research and Measurement Portal
- Supported by MeitY & NIXI

usage, and evolution, foster a collaborative environment in which data can be acquired, analyzed, and (as appropriate) shared, improve the integrity of the field of Internet science and inform science, technology, and communications public policies. It also has a capacity building and outreach component

which is being managed as an annual program. **The mission of AIORI 3 is to conduct annual skill development workshops and hackathons that strengthen India's internet infrastructure resilience and build a self-reliant supply chain of technical talent, limiting the country's exposure to externalities.**

The Initial Two in numbers 2024 - 2025

AIORI 1: Proof of Concept

5	250	23	69	2
workshop locations	Students Trained	hackathon teams	Students and Faculties	winning teams to IETF 122

<https://portal.aiori.in/aiori-1/>

AIORI 2: National Scale

11	291	50	~1500	53	23
faculty workshops	Faculty Trained	student workshop locations	student participants	remote hackathon teams	physical hackathon teams

<https://portal.aiori.in/aiori-2/>

2. AIORI 3 (Third Edition)

AIORI 3 continues this approach through a structured pipeline: faculty development and institutional engagement; student and researcher participation; problem statements in cybersecurity and future

Internet technologies; regional and online stages; and a national finale. Its technical foundation includes the AIORI Internet Measurement Network (AIORI-IMN) and the Anycast Test Bed, which enable participants to move beyond conceptual solutions and work with operational data and realistic deployment environments.

3. AIORI 3 - Details

AIORI 3

- Timeline, Expectations & Deliverables from Faculties

Phase/ Timeline	Expectation	Deliverables	Remarks
Faculty Onboarding 15 th Jun to 30 th Jun	Decide that want to participate	Submit the EOI Google Form	Confirmation Sent by AIORI team on selection.
Faculty Development Program 1 st Jul to 31 st Jul	Attend the Online Training. 2 sessions of 1.5 hours.	Training Completed.	Faculty Receives the FDP Certificate
AIORI Workshop 1 st Aug to 15 th Sep	Conduct workshop. Min 50 participants. Students & Other Faculties are invited.	Register Workshop on AIORI portal. Pics, Measurements & Report Shared.	Faculty receives the Honorarium of Rs. 4000 & certificate
Call for Hackathon 16 th - 30 th Sep	Encourage others & Self Register the Teams	Help Teams select the track & Problem Statement & Submit Problem Statement f any	Confirmation received by AIORI Team. 3 Member Team. 2 students & 1 Faculty. Max 3 teams per faculty.
Online Hackathon 1 st - 31 st Oct	Locally Mentor the teams. Another 2000 on Team Registration & Forward progress,	Ensure Teams are participating in review sessions, <u>github</u> submissions. Mentoring by AIORI	Based on Performance here, teams announced for Regional. Hackathon.
Regional Hackathon 01-Nov-30-Nov	Apply for being the Host Institute. Support of 4000.	Conduct the regional Hackathon.	3 Regional Hackathons. 10 Teams per regions. 2 teams per region will be selected.
ISEA Conference (To be Confirmed) Dec 2026	Share the Final Deck & Working Code	Present the final deliverable in the AIORI track	Teams Travel will be supported.

4. AIORI 3 – Component Details

4.1 Faculty Development Program: 1st July 2026 – 31st July 2026

The AIORI 3 Faculty Development Program (FDP) serves as the faculty capacity-building stage of the AIORI 3 initiative. It is designed to equip faculty members with the knowledge, resources, and practical understanding required to participate in and support subsequent AIORI 3 activities. The FDP program objectives were to introduce faculty members to:

- AIORI and its objectives.
- The AIORI 3 initiative, its mission, and key activities.
- India's Internet infrastructure ecosystem and its importance.
- Internet measurement concepts and practical measurement activities.
- The role of measurement in understanding and strengthening Internet infrastructure.
- The AIORI 3 Student Workshop program and the resources available for conducting workshops at participating institutions.

- The AIORI 3 Hackathon, its tracks, problem statements, team structure, and opportunities for faculty mentorship.

Faculty members who participate in the FDP can subsequently support student capacity building by sharing their knowledge, conducting workshops, acting as resource persons, and mentoring student teams throughout the AIORI 3 Hackathon.

4.2 AIORI 3 Student Workshops: 7th August 2026 – 15th September 2026

The AIORI 3 Student Workshops are designed to introduce students to **AIORI, India's Internet infrastructure ecosystem, Internet measurement, and emerging technologies**, while providing practical exposure to Internet measurement activities. The workshop highlights are:

- One-day workshop at each participating institution.
- Minimum **50 student participants** per workshop.
- Workshops to be conducted between **7 August and 15 September 2026**.
- Workshop content and supporting resources provided by the AIORI 3 Organizing Committee.
- Students introduced to practical Internet measurement activities.
- Students will register on the AIORI portal and enroll under their respective faculty.
- Workshop report, photographs, and required documentation to be submitted after the event.

The designated **SPOC Faculty** will coordinate the workshop at their institution. Other faculty members may serve as **Resource Persons** and conduct sessions using the content and resources provided by the AIORI 3 Organizing Committee. The designated SPOC Faculty will receive an **honorarium of ₹4,000** upon successful completion of the required workshop activities and submission of the required documentation.

4.3 AIORI 3 Hackathon

The AIORI 3 Hackathon provides students with an opportunity to work on **real-world challenges related to India's Internet infrastructure and emerging technologies**, develop practical solutions, and participate in a structured journey from local mentoring to national-level competition.

Five Hackathon Tracks

Cybersecurity	Internet Measurement	6G & Future Networks
Smart Cities	Cloud Computing & IoT	

Problem statements will be contributed by stakeholders across the five tracks. Teams may also propose their own problem statements. Such proposals may be considered for inclusion in the hackathon subject to review and approval by the **AIORI 3 Organizing Committee**.

4.3.1 Call for Hackathon & Team Formation: 16 September – 30 September 2026

Faculty members will help interested students form teams and select suitable problem statements. The team will have **3 members per team** comprising of **2 Students + 1 Faculty Mentor**. Each faculty member may mentor a maximum of **3 teams**. Faculty mentors will help teams understand their selected problem statements and provide local mentoring and guidance throughout the hackathon.

4.3.2 Online Hackathon: 1 October – 31 October 2026

Teams will work on their selected problem statements during the online hackathon. Faculty mentors will:

- Locally mentor their teams.
- Help teams understand and develop solutions for their selected problem statements.
- Support team registration and forward required progress information.
- Ensure teams participate in scheduled review sessions.
- Ensure teams complete required **GitHub submissions**.
- Monitor team progress and coordinate with the AIORI 3 team.

Faculty Support

Faculty mentors will receive an additional **₹2,000/-** for team registration and forwarding the required progress information, subject to the applicable program requirements. **This is applicable for faculties who have successfully completed the FDP program and hosted the student workshop.** The AIORI 3 team will provide mentoring and technical guidance to participating teams. Based on team performance during the online hackathon, teams will be selected for participation in the Regional Hackathons.

4.3.3 Regional Hackathons: 1 November – 30 November 2026

Three Regional Hackathons will be conducted for teams selected from the online hackathon.

- Regional Structure:
- 3 Regional Hackathons
- 10 Teams per Region
- 2 Teams selected from each Region
- A total of 6 teams will progress to the final stage.

Institutions may apply to become a Regional Hackathon Host Institute. Selected Host Institutes will receive ₹4,000 in support for conducting the Regional Hackathon.

4.3.4 Hackathon Finals: 17 December 2026

The AIORI 3 Hackathon Finals will be conducted as part of the ISEA Conference at IIT Jammu. Finalist teams will be required to:

- Share their Final Presentation Deck.
- Submit their Working Code.
- Present their final deliverable in the AIORI Track at the conference.

Travel support will be provided to finalist teams for participation in the final event, subject to the applicable program guidelines.

5. Beyond the Hackathon

a) AIORI Measurement Observatory

Finalist students will have the opportunity to participate in the AIORI Measurement Observatory for the following 12 months. Through the Measurement Observatory, students can continue to gain practical exposure to Internet measurement and contribute to ongoing AIORI activities. Students who successfully participate in the Measurement Observatory will receive Internship Certificates.

AIORI 3 creates a pathway for students and faculty to learn, measure, build, innovate, and contribute to India's Internet infrastructure ecosystem.

b) AIORI Network

AIORI 3 brings together students, faculty, academic institutions, researchers, and Internet technology stakeholders to strengthen India's Internet infrastructure resilience and develop a self-reliant pipeline of technical talent.

5. Supporters

