



IITB TRUST LAB

DIGITAL : SECURE : RESPONSIBLE

ACTIVITIES AT TRUST LAB





VERTICALS

01

Science (research-related activities)

Support faculty and researchers from various disciplines to work together on innovative solutions that address critical questions in the domain of Digital Trust.

02

Technology (development-related activities)

Collaborate with the government on essential Digital Trust security initiatives. Additionally, partner with various industries to spearhead research and development projects, creating Free and Open Source Software (FOSS) content to benefit the broader tech community.

03

Ecosystem building (educational, outreach & entrepreneurship-related activities)

Promote public outreach through workshops, colloquiums, internships to disseminate our knowledge and discoveries, as well as contribute to upskill the nation's human capital.

5-YEAR PLAN FOR TRUST LAB



SCIENCE

Introducing innovative grants to drive research and development in Digital Trust, with a focus on projects which have real-world application.



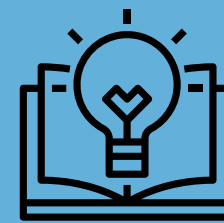
TECHNOLOGY

Prioritizing translational research and partnerships with government and industry to develop practical solutions in the domain of Digital Trust.



ECOSYSTEM

Supporting ecosystem growth through event sponsorships and scaling up existing activities to foster collaboration and knowledge exchange.



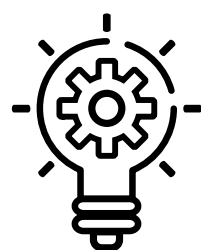
EDUCATION OUTREACH

Initiating specialized Executive Education programs to equip professionals with the necessary skills and knowledge.



SCALING UP INTO A CENTRE

Investing in infrastructure and staff training to establish an independent center dedicated to advancing Digital Trust research and innovation.



SCIENCE



1

Area 1

Expansion of Trust Lab Grant to encompass the entire ecosystem, including academia, startups, and independent researchers.

2

Area 2

Extending grants previously allocated to projects demonstrating potential for translational research.

3

Area 3

Grand challenges for research proposals demonstrating potential for real-world application and product development.

4

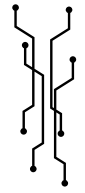
Area 4

Organize retreats to facilitate inter-disciplinary research

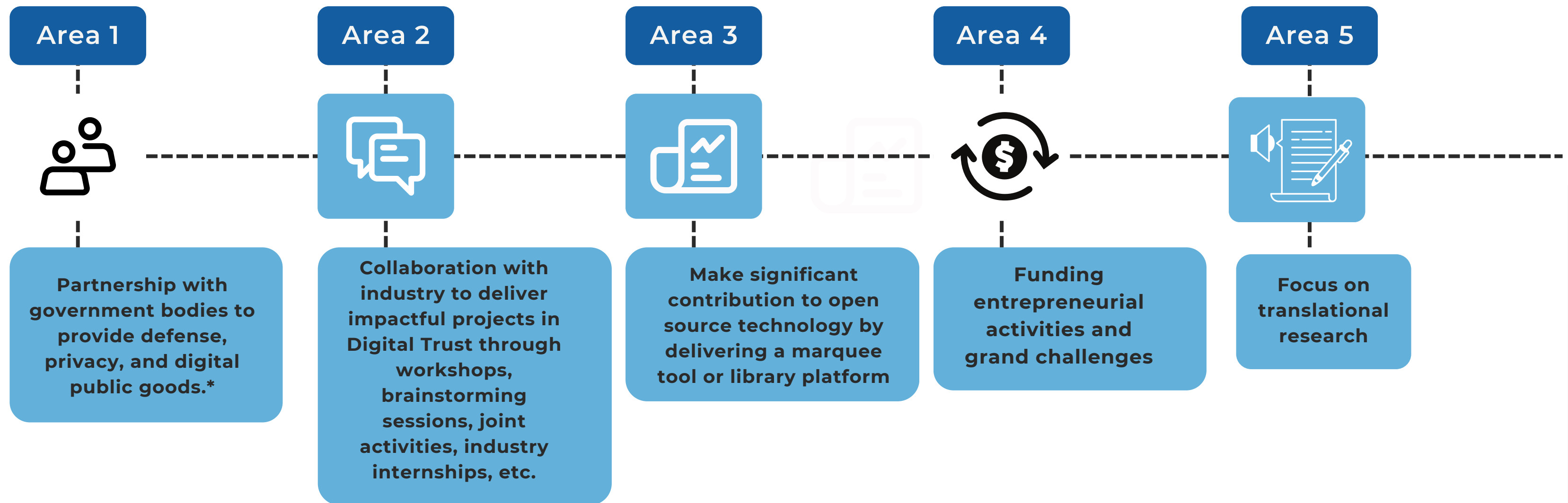
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Area 5

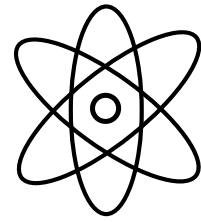
Hiring of core faculty



TECHNOLOGY



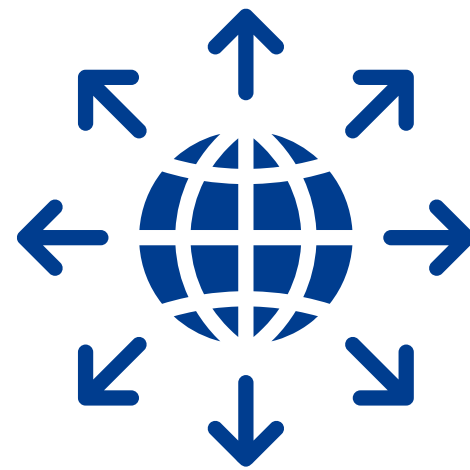
*Dialogue for collaborations in progress with NSA, MEITY, and Ayushman Bharat.



ECOSYSTEM

Trust Lab will expand its existing events and initiatives such as those listed below:

- Early Career Awards
- FOSSx
- CTF
- Summer School
- Trust Summit
- Winter School



Trust Lab will also sponsor events within the ecosystem hosted by other institutions, without being directly involved in their management, to further support collaboration and knowledge exchange.

- In 2023, Trust Lab sponsored two CTFs: DEF CON Delhi Group's and The Backdoor CTF by IIT Roorkee.
- In December 2024, Trust Lab supported a 2-week Winter School in the Web3 domain by Aptos Foundation.

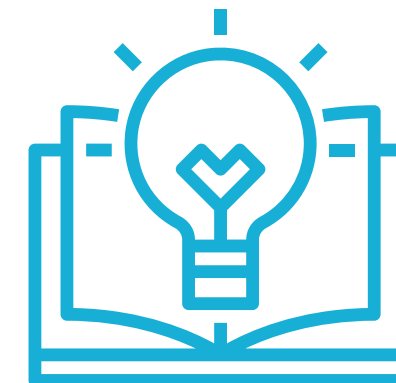


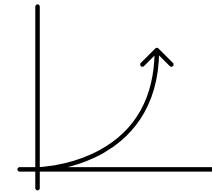
EDUCATION OUTREACH

Introduce specialized professional education diploma certificates and executive courses covering various aspects of Digital Trust.

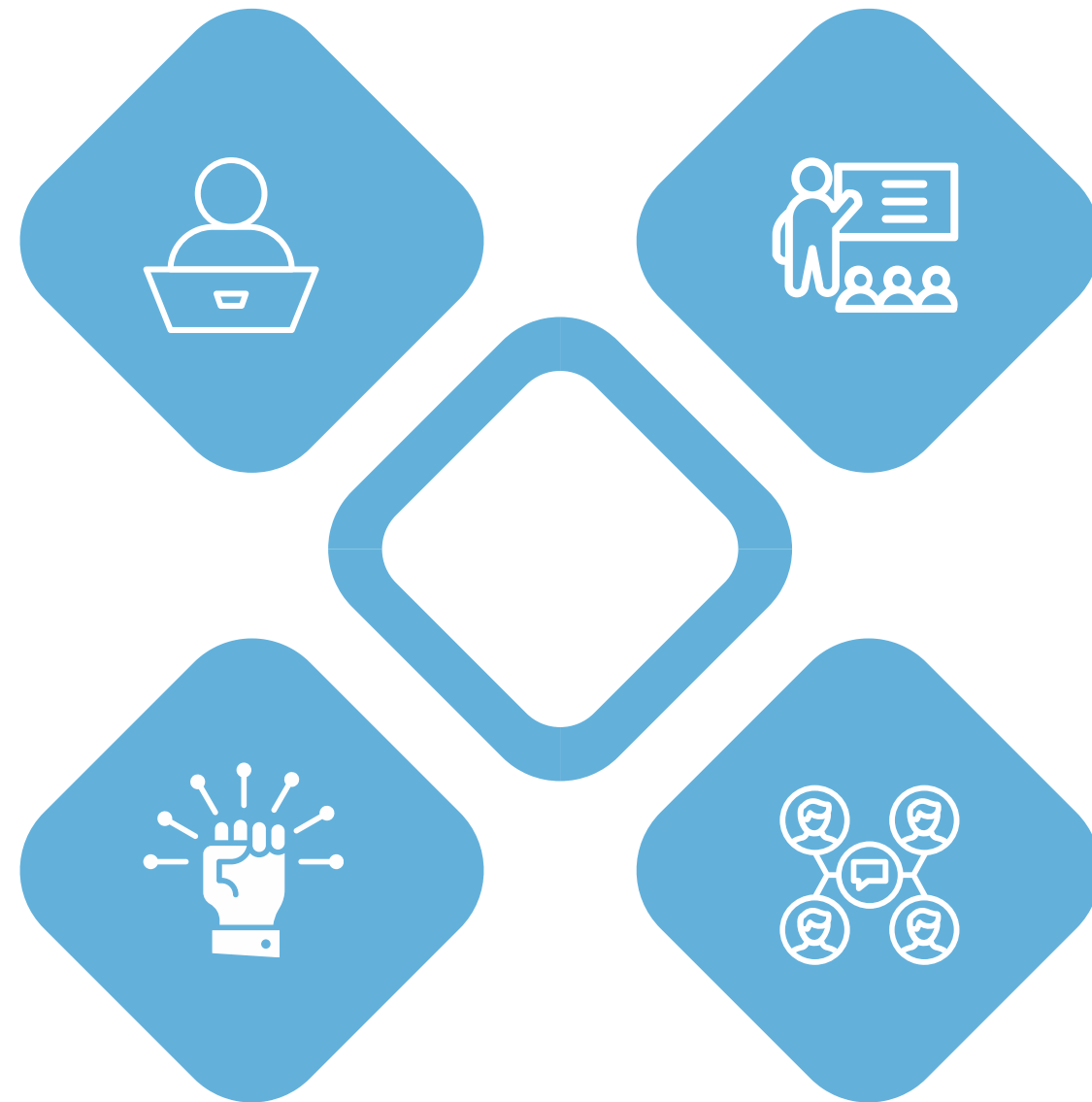
Tailor these programs to cater to professionals seeking specialized knowledge and skills in the domain of Digital Trust.

Achieve financial self-sustainability for the Trust Lab within five years by leveraging revenue generated from the education outreach courses.





SCALE UP TO A CENTRE



Become an independent center or a School of Digital Trust at IIT Bombay

WORLD LEADER

Become a world leader in the domain of Digital Trust.

INFRASTRUCTURE

Invest in infrastructure and staffing to establish a robust and independent center.

AUTONOMY

Attain autonomy to facilitate agile decision-making in pursuing the center's objectives.

CAPACITY BUILDING

Capacity-building initiatives to empower staff with the skills and resources necessary for effective operation and leadership.



TRUSTNET

Envisioned as a **network of partners** who share the vision of IITB Trust Lab for enabling a trustworthy digital environment.

TrustNet will focus on **creating and deploying pedagogical and practical resources** at various levels, and organising activities.

Apart from IIT Bombay, the network will include a select **set of universities and research institutions, along with relevant industry and government partners.**

TRUSTNET BENEFICIARIES



Researchers

Academia

- Trust Lab Grant
- Early Career Award
- Pre-doctoral Program
- Colloquium



Students

Academia

- Capture the Flag Contest
- Internship Program
- Winter Schools
- Open Source Tool Exploration
- Workshops



Larger Ecosystem

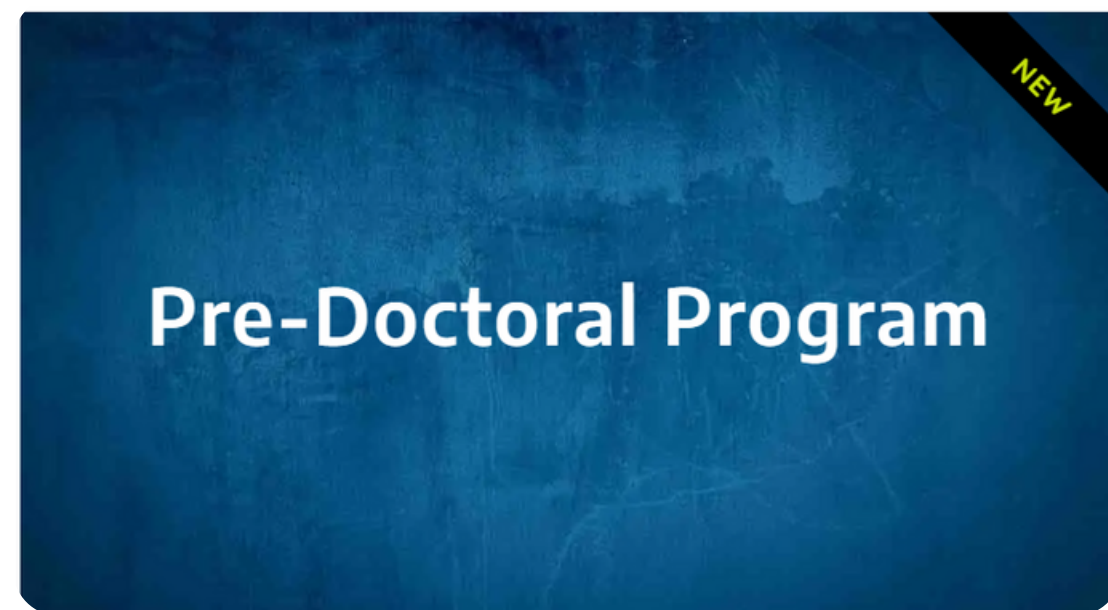
Academia + Industry + Government

- Trust Summit
- Workshops
- Digital Trust Compendium
- Visit to First Summit of Centers for Digital Trust

PRE-DOCTORAL PROGRAM



A full-time, paid non-degree program for undergraduates, graduates and early career professionals interested in exploring and refining their research skills in preparation for a doctoral program in the domain of digital security.



INTERNSHIP PROGRAM



- For UG students nationwide, focused on Digital Trust
- Nine-month duration (May to December 2023) combining virtual and onsite work
- **Received 1, 700 applications nationally**
- 17 students selected who are being mentored by an IITB faculty
- Program now operates on a rolling basis, accepting applications from qualified candidates year-round





EARLY CAREER AWARD

- Awards to recognise exceptional contributions in the domain of Digital Trust
- Two annual awards of INR 3 lakhs each
- Focus on faculty members who are at the outset of their careers
- Open nationally to all researchers in this domain
- 44 applications received



The poster features the TL logo in the top left corner. A lightbulb icon is positioned to the left of the title 'EARLY CAREER AWARD 2023'. Below the title, a text box states: 'Two annual grants of INR 3 lakhs each to recognise exceptional contributions in the domain of Digital Trust by researchers in India.' A yellow arrow-shaped box on the left contains the text 'APPLY BY: NOVEMBER 30'. On the right, a yellow box labeled 'Digital Trust' contains a list of research areas: CRYPTOGRAPHY, BLOCKCHAINS, HARDWARE SECURITY, GAME THEORY, NETWORKS, WEB SECURITY, PUBLIC POLICY, and FORMAL METHODS.

TL

EARLY CAREER AWARD 2023

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APPLY BY: NOVEMBER 30

Digital Trust

- CRYPTOGRAPHY
- BLOCKCHAINS
- HARDWARE SECURITY
- GAME THEORY
- NETWORKS
- WEB SECURITY
- PUBLIC POLICY
- FORMAL METHODS

WINTER SCHOOL



01

2022

ACM Winter School

The participants (~60) focused on foundational knowledge in Digital Trust, the current state-of-the-art research challenges and opportunities, and future trends.

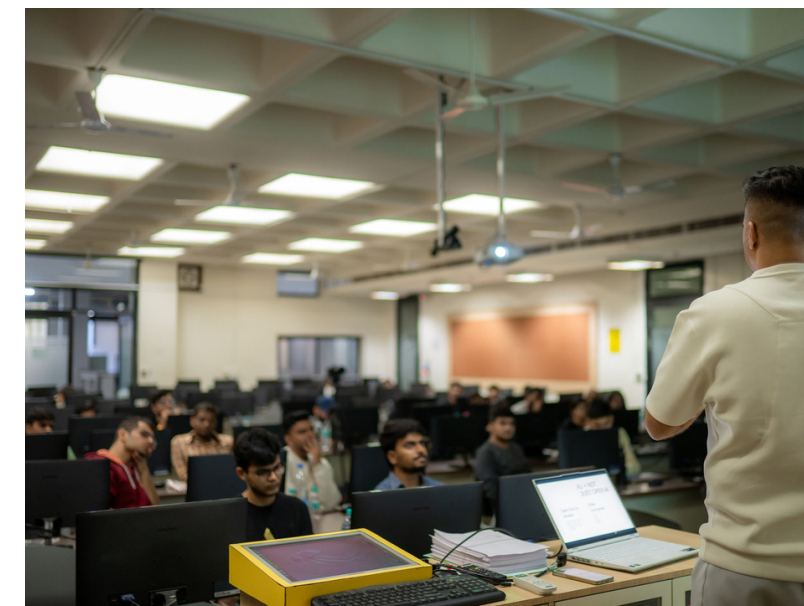


02

2023

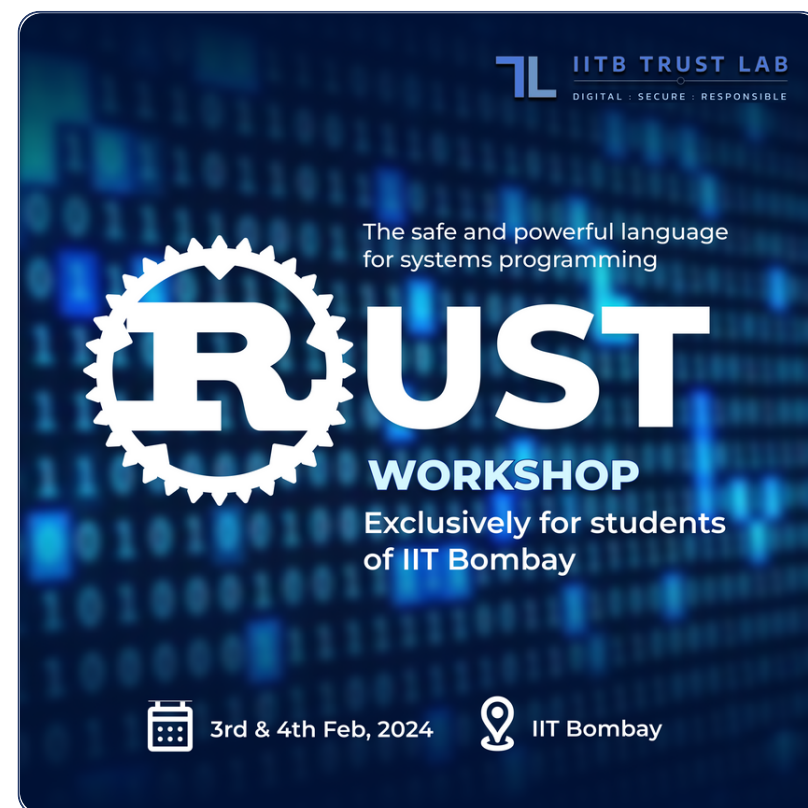
Aptos Winter School

A blockchain-focused two-week immersive Winter School held in collaboration with Aptos Foundation for UG, PG and PhD level student developers in India. **800 + applications of whom a maximum of 58 students were selected.**



WORKSHOPS

Addressing industry-specific topics such as **RUST** and **FRAUD** (planned for March 2024)



~400 registrations received. Around 50 students participated in the workshop.

OPEN SOURCE TOOL EXPLORATION

- An open-source Tools (FOSS) Exploration & Exposition Challenge (Nov 2023- January 2024)
- Over 150 students applied from all over the country
- Participants in teams of two, explored designated FOSS tools relevant to cybersecurity
- 12 teams comprising 18 contestants produced a white paper that can serve as a valuable reference for cybersecurity professionals and enthusiasts





trustlab@cse.iitb.ac.in



+91-22-2159-6725



Department of Computer Science and Engineering
Indian Institute of Technology Bombay
Powai, Mumbai 400076