- 48 Hours Hackathon for all Goan students
- Use coding & logical skills to solve core policing problems
- Design scalable solutions to boost police efficiency

THE PRIZE MONEY

First Prize - 25000/-
Second Prize - 15000/-
Third Prize - 10000/-

DATE :- 22/08/2022

VISIT
https://citizen.goapolice.gov.in/web/guest/hackathon

CONTACT
DySP Cyber Crime : 0832-2443201
https://www.cybercrime.gov.in/

Registration open from
03/08/2022 to 13/08/2022

PROBLEM STATEMENT

- Facial Recognition
- Malware Analysis and Investigation
- Decoding Virtual Number
- Dark web/Social Media Monitoring through OSINT
- Ethical Hacking for Vulnerability Assessment
- Open Ended Problem

Goa Police is excited to announce its 1st ever Hackathon to encourage the students to use their logical and/or coding skills to solve core policing problems. With increasing reliance on technologies while on one hand prevalence of cybercrimes has increased on the other hand technology has transformed the way things are done. With the aim of using technology to boost police efficiency and to use technological advancements to augment conventional way of detecting crimes, Goa police urges all Goan students to enthusiastically participate in the event and contribute to the service of the people and nation building.

Hackathon is being organized as a partnership between Goa Police and students who can use their innovative thinking, technical knowhow and enthusiasm for building digital solutions for effective policing and assuring civil safety. Though the Hackathon is being organised in a competitive format, but it is in fact the first step in partnership of socially responsible students with law enforcement agencies in building a safe and secure society.

All Goan students are invited regardless of the field they are pursuing to participate in this endeavour to ensure safety in the society through technological solutions for crime detection and prevention.

Format of the Hackathon

- **Registration & Abstract Submission**
- **Shortlisting of teams based on the abstract submitted**
- **48 hours Hackathon for designing of solutions**
- **Final Presentation**

Registration & Abstract Submission

- Participant need to register their teams at https://bit.ly/3Q6BNFM.
- Team should have at least 2 members and at most 4 members.
- Teams may enter the contest by submitting an abstract on any one or more of the problem statements (list of problem statement is annexed).
- Teams need to submit a two-page abstract for the chosen problem containing:
    - An explanation of the problem statement (max. 100 words)
    - Proposed solution to the problem statement (max 200 words)
    - Features of the final solution to be designed (max 200 words)
    - Reason for opting for the problem statement (max 100 words)
    - Past expertise in the area (if any)
- Deadline for emailing the abstracts on picyber@goapolice.gov.in is **23:59 hrs on August 13, 2022**

Shortlisting of Teams

Only 20 teams will be selected to participate in the final 48 hours Hackathon based on the abstract submitted. The abstract will be evaluated on following parameters:

- Suitability of the proposed solution to the requirements of police
- Usability of Policing application
- Technical and economic feasibility of the proposed solution
- Scope of scalability of the proposed solution
- Scope of deployment during the 48 hours Hackathon duration

The results of the selection of teams following scrutiny of the abstract will be declared on **August 16, 2022**.

48 hours Hackathon

The 20 teams selected on the basis of the abstract submitted will be invited to participate in the final non-stop 48 hours hackathon to bring their ideas to fruition. At this stage the teams are expected to design a working prototype of the solution based on the chosen problem statement. The event will start at 00:01 hours on **August 20, 2022** and shall continue till 23:59 hours on August 21, 2022. In the end the designed application/solutions along with data, libraries, dependencies etc. shall be submitted to the Goa Police Team at the venue.

Final Presentation

- All 20 teams shall present the prototype designed during the Hackathon period to a panel of judges on **August 22, 2022**.
- Each team will be given a 10 minutes slot for presentation.
- The presentation shall be evaluated on the basis of suitability to police requirements, technical innovation, design robustness and UI/IX.
- The marking criterion for final presentation shall be communicated later.

Prize& Rewards

Certificate of Participation will be awarded to all the participants and cash prizes will be awarded to the winners of the Hackathon as following:

1st Prize: Rs. 25,000/-
2nd Prize: Rs. 15,000/-
3rd Prize: Rs. 10,000/-

Problem Statements

1. Facial Recognition:

Explanation: Build a face recognition based solution to establish the identity of the person based on matching with databases of arrested persons, missing persons, tenants and unidentified dead bodies. Identity of the person may also be established by searching across open databases or through use of Open Source Intelligence (OSINT) tools.

Expectations:

- Establishing identity of person based on his/her photograph.
- Robustness of the system to detect faces which may be partially visible due to the varying angles at which CCTV cameras are typically placed
- Handle people of different age, skin colour, gender and facial structure
- Identify suspects with sufficient accuracy based on photographs of suspects provided as input.

2. Malware Analysis and Investigation

Explanation

Due to the amount of personal information a device holds, malware detection is very important to ensure the protection of data and mitigate attacks. Analysis of malware shall be done with the aim of identification of the accused involved in implanting of the malware and those benefitting out of it.

Expectation

To develop a malware detection tool that can be used to detect malware and applications that have backdoors. Identification of the accused/beneficiaries of such malware(s).

3. Decoding of Virtual Numbers

Explanation: Identification of the accused/suspects involved in using Virtual Numbers to make calls and avoiding disclosure of their identity.

Expectation: An app or software can be developed that can trace the origin of these virtual numbers and also find details of IP/VoIP calls.

4. **Dark Web/ Social Media Monitoring**

Explanation:

A plethora of illicit activities are being facilitated by the usage of encrypted networks on the dark net.
Likewise, actionable information can be gathered about a person or a phone number through use of Open Source Intelligence Techniques. Social media can also be used for sentiment analysis of the public with respect to any trending topic.

Expectation:

A tool for monitoring dark web and gathering actionable intelligence.
A tool for collection of information about a person or a phone number or an email-id through OSINT.
An interface/tool for sentiment analysis on topics on prominent Social media

5. **Ethical Hacking for Vulnerability assessment**

Explanation:
To identify the vulnerabilities in the website security which can be exploited by the miscreants so that these vulnerabilities can be plugged with the end result to enhance its security. The name of the website which can be used for this exercise shall be communicated later.

Expectation:
To find the vulnerabilities in the current security infrastructure of the said website and propose solutions to fix them.

6. **Open Ended Problem**

Explanation:
There are numerous areas where technological solutions can be used for aiding the efficiency and effectiveness in policing. The teams opting for this problem statement can identify such areas of policing where technology can augment current ways of functioning and design prototype solutions for them.

Expectation:
An app/tool based solution that will increase efficiency/ facilitates police functioning in any identified area of choice.