From
The Eye, CSEA
PSG College of Technology,
Coimbatore - 641004

14th May, 2023

To
The Principal
PSG College of Technology,
Coimbatore – 641004

Through: Computer Science and Engineering Association

Respected Sir,

Subject: Request to conduct 10-day event under Cybersecurity Club in the CSEA

I am writing to request your permission to conduct an event in our college. As you know, our college has a rich tradition of organizing various events that provide students with opportunities to showcase their skills and talents.

The event that we have in mind is "Aerospace Cyber Security". This event is intended to have workshops to give an introduction to Aviation Security, a hackathon to find solutions to problems regarding Aviation Security, and an "AvCon" Presentation Conference for finalists with invitees fromr respective industries. We are planning an elaborate and huge event to last 10 Days from July 4 to July 14, tentatively. We believe that this event will provide an excellent opportunity for students to understand the aviation industry, its challenges, and opportunities. The event will highlight the crucial role of cybersecurity in the aviation industry and its importance in protecting critical infrastructure. By attending this event, students will gain valuable insights into the aviation industry and develop a deeper understanding of the importance of cybersecurity in such fields, which will help them in their future careers.

In order to organize this event successfully, we will need your support and guidance. We are confident that with your consent and support, we will be able to make this event a grand success.

We have already formed a team of enthusiastic students who are willing to work tirelessly to ensure that this event is organized in a professional manner. We will be happy to keep you informed about our progress and seek your guidance at every stage of the event.

We look forward to your approval and support for this event. Thank you for your time and consideration.

Sincerely,

Aaditya Rengarajan and Team,
The Eye (CSEA)

Encl. Event Plan

Enclosure: Event Plan

AEROVISION~

AEROSPACE CYBERSECURITY EVENT AND CONFERENCE 2023

Proposed Knowledge Partners: ISAC (https://www.isacindia.org/), Cyberange (https://cyberange.io/)

Proposed Sponsors: GMRAA (https://gmraviationacademy.org/), Securzy (https://securzy.io/), IntelliMindz (www.trainingincoimbatore.in), HAL (https://hal-india.co.in/), icrewsystems (https://icrewsystems.com/en/), ecaps India (https://caps.in/), Pradhaan Air Express (http://pradhaanair.com/), FlyBig (https://flybig.in/), Planet X Aerospace (http://www.planetxaerospace.com/), IntellX Software Solutions (https://www.intellx.in/)

Proposed In-House Partners:

Knowledge Partners: GitHub Campus Club (https://www.instagram.com/github_campus_psg_tech/), Aero Modelling Club (https://www.instagram.com/psg_tech_aeromodelling_club/)

Other: Institution's Innovation Council (https://psgtech.edu/IIC/)

Prize Pool: INR X (min: INR 10,000) in ratio of (6:3:1)

First Prize: INR 0.6X + 1 Month of Free Cyberange Labs (x2) + 1 Month of Securzy Pro (x2)

Second Prize: INR 0.3X + 1 Month of Free Cyberange Labs (x2)

Third Prize: INR 0.1X + 1 Month of Securzy Pro (x2)

Runner-Up: 1 Month of Securzy Pro (x2)

Other Expenses: INR 9,764 (Rounded to INR 10,000)

Hosting Expenses:

- Domain Hosting and Server Hosting for CTF
- Server Spaces will be given to Participants for Secure Coding Stream

Financial Expenditure Plan: Prize Pool from Sponsors, Hosting Expenses by IntellX, Other Expenses from CSEA

Other Expenses Breakdown:

ITEM	SPECIFICATIONS	AMOUNT (IN INR)
Customized Pens for 80 participants of round 2 (https://www.printland.in/customize/L131---Highway-Satin-Finish-Pen---Black-95133.html)	80*INR 22	1,760
Refreshments from canteen	Day 1: 150*INR 12 (Tea) = INR 1,800 Day of AvCON Conference: 75*INR 32 (Tea + Juice) = INR 2,400	4,200
Banner Printing and Custom Lanyards for Winners	5 x 5 sq.ft (Each sq,ft costs INR 26) Banner printing cost includes printing, bringing frame for fixing the banner (one day charge)	650
Hard Copy of Certificates	(First Copy: INR 35, A4 size) Certificates of Participation - 142 participants (1*35 + 141*13 = INR 1,868) Certificates of Achievements - 8 winning individuals (1*35 + 7*13 = INR 126)	3,154
Total		**9,764**

Intellectual Property Agreement: Any intellectual property developed during and within the scope of the hackathon is under the command of the intellect that generated it. It is up to the participants to accept or not the proposals of the organizers on the post-event.

Proposed Dates: July 4 – July 14, 2023

Maximum # of Participants: 150 Participants

Eligibility Criteria: Open to All Departments and Years of PSG College of Technology.

Pre-Requisites

- Knowledge in basic Coding Concepts
- A brief history showcasing the individual's interest in either Coding, Security, or Aviation

July 4 (Tuesday | Offline Session [4:30PM - 6:00PM])

- [4:30PM - 4:45PM] Intro to the Event
- [4:45PM - 5:00PM] Partners and Panel Introduction
- [5:00PM - 5:15PM] Introduction to Aviation Security (Session by Aero Modelling Club)
  - What are we trying to protect?
  - Profile of an Airport, Profile of an Airplane
  - A peek into Drone Security and Drone Systems
- [5:15PM - 5:30PM] Secure Coding Techniques, GitHub and GitGuardian (Session by GitHub Campus Club)
- [5:30PM - 6:00PM] Linux and Python Basics for Security

July 5 (Wednesday | Online Session [7:30PM])

GitHub Stream

- What is secure coding for aerospace?
- Top 10 vulnerabilities in
  - Commercial Aviation web portals
  - Aerospace Embedded Systems
- Using GitHub for private collaboration work (Session by GitHub Campus Club)
- What is Software-Defined Radio and ADS-B? (Session by ISAC)
- Problem Statements Release
  - Develop a simulated ECAM System as a Software Application
  - Develop a secure Ticketing and Aircraft Tracking system
  - Develop an in-flight entertainment system as a web-application, and simulate the aircraft parameters for live flight tracking
  - Develop an offline in-flight entertainment system with 0 internet dependencies, and simulate the aircraft parameters for live flight tracking
  - Develop a flight-scheduling and dispatch, and pilot management system
  - Develop a system for timely plane quality assurance, inspection management, engineering support
  - Develop a system for customer information management (e.g. flight history, contact data)
  - Develop a system for revenue cycle management, cost, and financial analysis
  - Develop a system for departure/arrival and runway flow management for airports

- Develop a system to track passenger footfall and analyze the same based on the number of check-ins at an airport
- Develop a radar system for air traffic controllers with a live radar screen based on ADS-B feed, and a wi-fi based communication system
- Develop an airline reservation management system
- Develop a system for fleet maintenance, inventory tracking and flight operations
- Develop a tool for intercepting Drone Downlinks and Drone Hijacking
- Develop an automated Drone Delivery system app like Swiggy
- Develop a Drone-Based Transport App like Porter.In
- Develop Software related to National Air Defense for war

Vulnerability Testing Stream

- What is a Capture-The-Flag? (Session by ISAC)
- Using the Lockheed KillChain to identify vulnerabilities
- OWASP Top 10
- What is SCADA?
- How to test SCADA?
- Tips to score in a CTF
- Release problem statement
  - There exists an airline company "iFly" whose website is available at ifly.intellx.in. Compile a list of all flags found in their services and submit to portal.

July 6 (Thursday | Offline Session [5:00PM])

Offline MCQ Round (Round 1) at PSG College of Technology. [Different Kahoots for different streams]

Top 50 Members are taken for Secure Coding Stream Round 2

Top 30 Members are taken for Vulnerability Testing Stream Round 2

July 7 - July 10 [12AM - 11:59PM] (Friday, Saturday, Sunday, Monday)

Hackathon Takes Place.

Students will be allowed to use campus premises on Saturday from 10AM to 3PM for offline team-collaboration.

July 11 (Tuesday | Online)

All GitHub Repositories must be made public between 12:00AM and 10:00PM of this day.

Depending on whether the participant decides for the software solution to be Open-Source or Proprietary-Ware, they can choose to keep it public or change it to private after 10:00AM.

Submissions will be made on DevPost (https://devpost.com/)

Panels Review takes place.

Top 5 teams from each stream is released by 10:00PM

July 12 (Wednesday | Online Session [8:00PM])

Online MCQ Round on Kahoot Platform and Google Meets Platform is conducted at 8PM, and top 4 out of 10 teams are announced as winners. [Kahoot will be conducted amongst all 10 teams on the topic of Secure Coding]

July 13 (Thursday | Offline Session [01:00PM])

Prize Distribution and Closing Ceremony at College (Audience: All participants that qualified to Round 2)

July 14: AvCON Conference Event Friday 4:30PM - 6:00PM | Offline Session

Audiences :- Interested and Available Event Organizing Partners, All available members from in-house partner clubs, All interested professors.

Venue :- Preferably a room in F Block

The 4 winning teams will have to present their unique ideas on-stage, and interested event-organizers/partners can put forward proposals to developers as to their interests post-event.

[4:30PM] Opening Keynote and Welcome to Partners and Winners by The Eye

[4:45PM] Team 1

[5:00PM] Team 2

[5:15PM] Team 3

[5:30PM] Team 4

[5:45PM] Closing Keynote

END OF DOCUMENT