

MEMORANDUM OF UNDERSTANDING

Between



Punjab Engineering College
(Deemed to be University),
Sector-12,
Chandigarh-160012, India

And



Chandigarh Police
Additional Deluxe Building,
Chandigarh Police Headquarters',
Sector 9-D, Chandigarh – 160009, India

Punjab Engineering College (PEC) Chandigarh and Chandigarh Police, UT Chandigarh since long has mutual beneficial academic linkages with each other's.

Both the parties, after due deliberations, have now decided to sign a MoU, effective from 8th December, 2021, the mutually agreed terms of which are the following: -

PUNJAB ENGINEERING COLLEGE (Deemed to be University) (erstwhile PEC University of Technology) set up in collaboration with Chandigarh Administration and NASSCOM, having its main office at Sector-12, Chandigarh – 160012, which expression, unless otherwise repugnant to the context and meaning thereof, shall mean and include its successors in interest and assigns and represented by its representatives of the first Party.

ABOUT CYBER SECURITY RESEARCH CENTRE

The Cyber Security Research Centre has been established at PEC in collaboration with Chandigarh Administration and NASSCOM with an initial funding of Rs 3 crores. The formal collaboration was for a period of five years and after that the Centre has become self-sustainable and generating its own funds through outreach, research and academic programmes. The centre has been set up with the mission to encourage, promote, facilitate and execute interdisciplinary research in areas of Information Security.

The Cyber Security Research Centre has been established with the primary focus to conduct applied Research & Development on cyber threats and countermeasures, secure multi-level information sharing, resilient command and control network architectures, social media and data analytics.

The Centre also runs educational programmes and perform outreach activities and contribute towards framing of standards and guidelines, policies, metrics and practices to protect our nation's information and communication systems. The centre closely collaborates with National Security Agencies, LEAs, Government, Academia and other International Forums to foster research in the area. Drawing on the strengths from Computer Science & Engineering, the Center is progressing well to become a valuable regional and national asset for the development of readiness and incidence response for protecting the nation's Cyberspace.

And

CHANDIGARH POLICE

Chandigarh Police, U.T. Chandigarh (hereinafter referred to as "CHANDIGARH POLICE") having its Headquarters at Additional Deluxe Building, Chandigarh Police Headquarters, Sector 9-D, Chandigarh, Chandigarh which expression, unless otherwise repugnant to the context and meaning thereof, shall mean and include its successors in interest and assignees and represented by its authorized representative, of the first Party

The aforesaid institutions are hereinafter referred to individually as Party and collectively as the Parties.

WHEREAS CSRC, PEC, Chandigarh, over the years, has gained unique expertise in for Cyber Security and its applications, state of the art technologies such as applications of Artificial Intelligence, Machine Learning, Deep Learning, Data Science in Cyber Security, Information warfare, Social Media Analytics, Mobile Sensing and purposes and has helped executing several projects of Government, semi-Government and Private Organizations as also demonstrated the capability to execute mission critical project with high degree of commitment and responsibility.

AND WHEREAS Chandigarh Police has a mission to give people an efficient, law abiding and responsive law enforcement machinery that renders the services i.e. prevention and detection of Crime, Cyber Crime, Crime against Women & Children, maintenance of public order, intelligence, research and awareness activities for preventing crime and ensuring public peace, management of traffic and special protective arrangements for certain individuals and installations for citizens of UT, Chandigarh.

Further, in order to address the increasing challenges faced by the Chandigarh Police in handling the growing spate of Cyber Crimes in the Chandigarh, Chandigarh Police is in process of setup of end-to-end state to art Cyber Policing & Research Directorate having Advance Cyber Training Lab, Cyber Fusion Centre, Digital Forensic Detection & Investigation Lab, Social Media Analytic Unit and Cyber Innovation Strategy and Outreach Cell and Research Unit. Networked infrastructure with other facility like Administrator Room, Inspectors Room, Conference Room, CCTVs, Centralized UPS supply, Data Center, dedicated network leased lines supporting a Cyber & Forensic Information and Communication Technologies enabled end-to-end state to art Cyber Policing & Research Directorate.

Now therefore, in consideration of the mutual covenants contained herein and intending to be legally bound hereby, the parties agree as follows:

1. **Broad Objectives**

- a. The overall aim is to enhance capabilities in the Innovation Led Cyber Crime Management and indigenize the production and availability of cutting-edge cyber tools/software and products, vital for national cyber security and interests, and for successful detection and investigation of the crimes involving use of Cyber Space, in a viable timeframe and make the country a leading cyber power of the world.
- b. To facilitate focused research in advanced cybercrime investigative technologies so as to establish worthwhile competencies in the field of Cyberspace focused on effective and efficient handling of cybercrimes and investigations as well as in associated niche areas to address specific technological and training needs of Chandigarh Police.
- c. Cybercrime research and test beds to be built for investigations' experimentation, introducing LEAs to simulated crime scenarios for effective investigation and effective closure of cases.

2. **Roles and Responsibilities of the Parties and Methodology for Execution**

- a. This MoU will work as an umbrella agreement under which various projects related to cyber security and operations may be undertaken by CSRC, PEC, Chandigarh by itself or in collaboration with other Government/Private Enterprises under the proposed Academia-Industry Partnership based on the intent and priority specified by Chandigarh Police.
- b. CSRC, PEC, Chandigarh and Chandigarh Police will jointly discuss and crystallize the short term (less than one year), medium term (one to three years) and long term (three to five years) Cyber Research and Development (R&D) Projects and Plans, estimated financial outlay and method to be employed for bulk production and supply of software and hardware to users. Avenues of Publishing Joint Compendiums, Research Publications etc. emerging as the outcome of the studies will also be explored.
- c. CSRC, PEC, Chandigarh will structure and conduct training programs for Chandigarh Police Personnel or nominated civilian cyber professionals working for the Chandigarh Police from time to time in consultation with and as specified by Chandigarh Police

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3. Roles and responsibilities of CSRC, PEC

- a. Act as nodal agency for providing and liasoning activities of the students who will take up the role of Community Policing Volunteers with Chandigarh Police.
- b. Identify emerging and futuristic technologies in the field of Cyber Crime and their likely impact on other dimensions of investigation of Cyber Crimes and development of requisite Software Tools and identification of latest Hardware Tools and to carry forward R&D in selected areas as highlighted in the "Objectives" clause. Accordingly, CSRC, PEC, Chandigarh will submit specific project proposals for consideration and approval of Chandigarh Police along with the financial implications.
- c. Share requisite infrastructure/equipment/learning resources including print material and e-learning material at CSRC, PEC, Chandigarh Campus and Cyber Crime Cell, Chandigarh Police suitable for taking up Cyber R&D Projects on mutually agreeable basis in a collaborative manner.
- d. Make expeditious effort to identify domestic industry partners, or industries with majority holding by Indian nationals, for joint R&D in broad priority areas and manage the relationship to attain the objectives of the scheme and maintain desired sanctity.
- e. Facilitate recruitment of new manpower for Cyber Crime Cell, Chandigarh Police suitably which includes Scientists, Research Scholars, Subject Matter Professionals, Technical experts, in consultation with Chandigarh Police to execute these projects, as required. These personnel will be selected by a Joint representation from both parties and selected candidates would be compensated as per Industry norms as mutually agreeable by both the parties
- f. Facilitate working of personnel from Chandigarh Police in CSRC, PEC, Chandigarh and Research Scholars of CSRC, PEC, Chandigarh at Chandigarh Police premises or facilities to carry forward ongoing R&D work and subsequent deployment/operation, whenever required.
- g. Deliberate with Chandigarh Police to identify knowledge domain where personnel from Chandigarh Police may be imparted training, formulate detailed sub-areas, prepare course materials and training schedules and conduct the training.
- h. Organize seminars, meetings and workshops as may be mutually decided and jointly funded by both the Parties from time to time.

4. Roles and responsibilities of Chandigarh Police

- a. Define the priority as regards broad technological domains in which CSRC, PEC, Chandigarh should focus and achieve breakthroughs with proprietary and indigenious technology within envisaged timelines.
- b. Prepare the Cyber R&D Plans jointly with CSRC, PEC, Chandigarh, as outlined under the "Objective" Clause above.
- c. Evaluate the R&D project proposals forwarded by CSRC, PEC, Chandigarh through and obtain necessary sanctions and waivers from the Competent Financial Authorities (CFAs).
- d. Assess the suitability and accord acceptance of Private Sector or Industry partner(s) proposed to be incorporated by CSRC, PEC, Chandigarh for joint R&D and project execution.



- e. Facilitate visit of members of a specific project at CSRC, PEC, Chandigarh to the premises of Chandigarh Police or its affiliated organizations and nominate personnel from Chandigarh Police to work in CSRC, PEC, Chandigarh as may be necessary for execution of the Projects.
- f. Carry out background check of Research Scholars/Experts to be hired engaged by CSRC, PEC, Chandigarh.
- g. Provide all necessary technical information that may be necessary to execute the Projects and arrange for suitable platform(s) in consultation and collaboration with CSRC, PEC, Chandigarh for testing/demonstrating the results of individual Projects.
- h. Provide suitable assistance to the members to be engaged by CSRC, PEC, Chandigarh in the core R&D work of the projects as may be mutually agreed upon, if there is a requirement for them to deploy/operate in field areas.

Sponsor atleast four PhD scholarships for a period of Four years as per rules of MHRD. The research undertaken by these scholars will be aligned to the needs of the Chandigarh Police.

- i. Incentivize existing manpower at CSRC suitably which includes Scientists, Research Scholars, Subject Matter Professionals, Technical experts, Professors in consultation with Chandigarh Police to execute these projects, as required. These personnel will be selected by a Joint representation from both parties and selected candidates would be compensated as per Industry norms as mutually agreeable by both the parties.
- j. Shall assign one Officer as Coordinator, who will act as the SPOC for interaction with CSRC, PEC, Chandigarh on the progress of R&D Projects.

5. Intellectual Property Rights (IPR)

- a. Intellectual Property Right (IPR) that may result out of the R&D projects funded by Chandigarh Police or its affiliated organizations under this MoU will be the joint property of Chandigarh Police and CSRC, PEC, Chandigarh on equal sharing basis with Chandigarh Police having the right to use it for their own or affiliated organizations' requirements. No party will assign its share of the IPR to any third party without written consent of the other.
- b. Source Code and Design documents arising out of the funding of R&D projects received from Cyber Crime Cell, UT Police will be made available by CSRC, PEC, Chandigarh to Chandigarh Police only and will not be shared with any third party without the consent. Technologies that may result out of the R&D Projects may be implemented by Private Sector/Industry for customizations but only after the consent given by Chandigarh Police, and any addition/alteration has to be done with consent of both the Parties i.e. Chandigarh Police and CSRC, PEC, Chandigarh through CFI.

6. Execution of R&D Projects

- a. Both parties shall do their jobs diligently and shall complete the Project(s) within scheduled time. Neither party, however, shall be liable for any default or delay, if that party is prevented from performing its obligations due to *Force Majeure* or by any other circumstances beyond the control of Parties, including any restriction(s) imposed on account of new law coming into force and/or directive(s) issued by the Government.
- b. In each case stated above, the party so prevented from performing, shall start working as soon as the difficulties/restrictions are removed and shall try its best to complete the Projects within reasonable time.



Sample topics of Short Term/Long Term Studies to be conducted for Chandigarh

S.No	Title of the Study	Timeline (months)
1.	Analyzing multi modal, Big Data for Generating contextual Actionable Intelligence	03
2.	Weaponization of Information for Radicalization of youth	03
3.	Monitoring and Scraping Data from Dark Nets for detecting illegal activities	03
4.	Exploring Feasibility of Designing Mobile Apps for various Police functions with Indian Mobile Operator (Jio/Bharti)	03
5.	Study on Creating OSINT – Non-Classified tools and sources	03
6.	Cryptocurrency: Its Forms and use/misuse	03
7.	Smart phone sensors-based tracking solutions	03
8.	Information Security Management: ISO 270001	03
9.	Protecting Critical IT Infrastructure	03
10.	Handling Fake News & Disinformation Campaigns	03
11.	Tools and Techniques for extracting metadata	03
12.	Use of Big Data to Generate Actionable Insights	03

Police

7. Disclaimer

All deliverables including but not limited to reports, know-how, Intellectual Property, data, information given by CSRC, PEC Chandigarh under this MoU to Chandigarh Police is on as-is-where-is basis and CSRC and/or its personnel including faculty and students do not make any representations, conditions, or warranties, either express or implied, with respect to such deliverables. CSRC does not give any warranty of fitness for particular purpose, or merchantability to Chandigarh, UT Police, in connection with any of the deliverables.

8. Indemnification

Chandigarh, UT Police shall expressly indemnify, hold harmless and defend CSRC, PEC Chandigarh, its Board of Governors, officers, employees, faculty, students, invitees, and agents (the "Indemnified Parties") against any and all third-party demands, claims, actions of any nature or kind whatsoever ("Claims"), liabilities, damages, ("Losses") arising out of or in any way associated with this MoU, including, without limitation, the use, manufacture, marketing and sale of its services, whether by Chandigarh, UT Police or persons deriving title from Chandigarh, UT Police.

9. Third-Party Intellectual Property Infringement

CSRC, PEC Chandigarh does not guarantee that the deliverables under this MoU are free from all or any third-party Intellectual Property infringement. Nothing shall constitute any warranty or representation by CSRC, PEC Chandigarh as to title to the Deliverables or that anything made, used, sold or otherwise disposed of under any license granted under this MoU is or will be free from claims or allegations of infringement of patents, copyrights, trademarks, industrial design or other intellectual property rights.

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10. Ownership of the Intellectual Property post completion of the project

Any modification, research, improvements done over the deliverables after completion and/or termination of this MOU shall be treated as a separate Intellectual Property and shall be owned solely by the party making such improvements.

11. Dispute Resolution

- a. In the event any dispute or conflict of interest arising in the implementation of the MOU endeavour shall be made to resolve such dispute by way of mutual discussion between the parties. However, in case the disputes still remain, the same shall be referred to the adjudication of an independent arbitrator for which, upon invocation of the arbitration clause, the Director Punjab Engineering College shall supply a list of 3 proposed arbitrators and any one of them, as approved by the second party i.e. Chandigarh Police shall be appointed as sole arbitrator to adjudicate the disputes including counter claims if any as raised by the party other than one raising the claims. The arbitration proceedings shall be conducted as per the provisions of the Arbitration and Conciliation Act 1996 as amended from time to time.
- b. In the event of none of the nominated persons being acceptable to the second party, the party invoking the arbitration clause shall be free to approach the Punjab and Haryana High Court Chandigarh for appointment of an independent arbitrator as per the provisions of section 11 (6) or any other allied provisions of the said Arbitration and Conciliation Act, 1996 as amended from time to time.
- c. The seat of arbitration shall be Chandigarh.
- d. It is further provided that all other disputes, if any, arising between the parties shall be subject to the jurisdiction of the courts of law at Chandigarh.

12. Duration

The MoU shall be for a period of 3 (three) years from the date of execution (effective date) and this duration, along with the timelines of the deliverables may be extended by mutual agreement by the parties.

13. Governing Law

This MoU shall be governed by the laws of Republic of India.

14. Termination

This MoU shall, unless otherwise extended by mutual agreement of the parties, shall terminate upon happening of any of the following events:

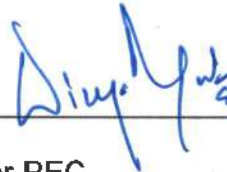
- i. Termination by mutual consent.
- ii. Any party may terminate the contract by giving 30 days' notice to the other party
- iii. Termination by either Party due to breach of any of the covenants hereof by the other, with three months prior notice to the defaulting Party.
- iv.

IN WITNESS WHEREOF, the parties hereto have caused this MoU to be duly executed in duplicate counterparts, each of which shall be deemed to constitute an original, effective from the effective date.

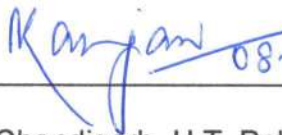
The undersigned verify that they have the authority to sign this MoU on behalf of the party they are representing as detailed below.


8.12.2021

For Chandigarh, U.T.
Police SH. KETAN
BANSAL, IPS SP


8/12/2021

For PEC
PROF. DIVYA BANSAL
Head CSRC and Dean Alumni,
Corporate & International Relations


08.11.21

For Chandigarh, U.T. Police
SH. PRAVEER RANJAN,
IPS DGP

Director General of Police
Union Territory, Chandigarh


08.12.2021

For PEC
PROF. BALDEV SETIA
Director

Director
Punjab Engineering College
(Deemed to be University)
Chandigarh