INSTITUTE FOR DEVELOPMENT AND RESEARCH IN BANKING TECHNOLOGY

(Established by Reserve Bank of India)

Advertisement No: 02/2022 – 23 **Dated: April 19, 2022**

Engagement for the Project on Adversarial Machine Learning

The Institute for Development and Research in Banking Technology (IDRBT), established by the Reserve Bank of India, is the premier Institute of Banking and Financial Technology in the country. The Institute spearheads efforts in providing state-of-the-art technologies for the Indian Banking and Financial Sector by interfacing Applied Research and Development, Academics, Executive Education, Practice and Consultancy so as to continuously enable the technology transformation of the Banking and Financial Sector in India and make it future-ready.

While data science subsuming AI/ML has gained a lot of traction in all fields of science, fraudsters / adversaries develop strategies to attack the data and model aspects of the AI/ML implementations. This field known as Adversarial Machine Learning has caught the attention of researchers and practitioners and has proliferated in recent years. This project aims to develop deep learning based attack strategies on use cases such as (i) machine learning based intrusion detection systems (ii) DDoS detection systems in Software Defined Networks (SDNs) and (iii) User and entity behavior analytics. It also envisages to develop homomorphic encryption based defense mechanisms to defend against/circumvent these attacks. Datasets shall be analysed and the end product of the research needs to help banks defend its financial networks in an objective and data-driven manner.

In order to contribute to this important research project, applications are invited from young dynamic candidates for the following temporary project positions:

POSITION: RESEARCH ASSOCIATE

i. **No. of Positions: Two**

ii. **Primary Responsibilities:**

To develop python based software to perform the following tasks:

- Machine Learning based intrusion detection systems
- DDoS detection systems in Software Defined Networks
- User and Entity behaviour analytics
- Conduct one of the three types of adversarial attacks on each of these use cases.
- To develop homomorphic encryption based defense mechanisms
- To carry out any other responsibilities assigned by the Institute.

iii. **Eligibility:**

(a) Educational Qualifications

- First class regular ME/M.Tech/B.E/B.Tech or above in Computer Science Engineering or Information Technology from a recogniSed University with a consistently good academic record throughout.

(b) Experience

- A minimum of one year post-qualification experience in industrial project development in the areas of Python, Machine Learning, Intrusion Detection Systems, Software Defined Networks

(c) Desired Skills

- Python, Scikit learn, Tensorflow, PyTorch, M

iv. **Term:** One year. Extendable based on the duration of the project, project requirements, performance of the candidate and fund availability.

v. **Compensation:** All-inclusive consolidated compensation of upto Rs. 35,000/- (Rupees Thirty-Five Thousand only) per month.

Rules and Regulations for all these positions

1. Both the above positions are purely temporary and on a contract basis under the project mode.
2. There is no scope whatsoever for further continuation, extension of term, absorption, regularisation, permanency, in the Institute under any circumstances
3. All educational qualifications must have been necessarily obtained by pursuing the courses on a full-time regular basis from recognised universities/institutions. If grades are awarded instead of marks, candidates should clearly indicate their numerical equivalent.
4. Relevant experience gained after the qualifying degree will only be taken into consideration.
5. Candidates should satisfy themselves about their eligibility for the position being applied for. Mere fulfilment of eligibility does not guarantee shortlisting for Selection Process.
6. Candidates should apply for the specific positions only in the format provided on the Institute's website.
7. Incomplete applications / not in the prescribed format / without all the required documents, will be rejected and no correspondence will be entertained by the Institute.
8. Candidates for these positions should enclose attested scanned copies of their Mark sheets and Certificates right from Matriculation onwards.
9. The candidature will be considered on the strength of the information declared in the Application. If at any stage, it is found that any information furnished is false / incorrect, the candidate has clandestine antecedents/background or if according to the Institute, the candidate does not satisfy the eligibility criteria, her/his candidature / appointment is liable to be cancelled / terminated at any point in time including after appointment, in addition to any disciplinary action as may be necessary.

10. In case of any inadvertent mistake in the process of selection which may be detected at any stage even after the issue of appointment letter, the Institute reserves the right to modify / withdraw / cancel any communication made to the candidates.

11. The Institute reserves the rights to screen and call only such candidates as are found prima-facie suitable for being considered

12. The Institute also reserves the right to restrict the candidates called for to the selection process to a reasonable number on the basis of qualifications, level and relevance of experience higher than the minimum prescribed herein and the requirements of the Institute. Thus just fulfilling the prescribed conditions would not entitle one to be called for the Selection Process. The Institute also reserves the right of rejecting any or all the applications without assigning any reasons therefore.

13. The Institute reserves the right to fill or not to fill any or all the positions advertised without assigning any reason.

14. In all matters regarding Eligibility, Qualification, Skills, Experience, Compensation, Contract Term, Selection Process, Assessment, Prescribing Minimum Qualifying Standards in Selection Process, and Communication of Result, the Institute's decision shall be final and binding on all the candidates and no correspondence shall be entertained in this regard.

15. Only shortlisted applicants will be contacted. No correspondence will be entertained from candidates regarding postal delays, conduct & result of selection process and reasons for not being called for the selection process.

16. Selected candidates should undertake to abide by all the rules and regulations pertaining to their retention as also the rules and regulations of the Institute.

17. The crucial date for determining the eligibility criteria for all candidates in every respect is the prescribed closing date for submission of application.

18. Interested candidates may forward a Covering Letter and Filled-in Application along with the copies / scanned copies of all the required documents to "The Human Resources Department, IDRBT, Castle Hills, Road No.1, Masab Tank, Hyderabad – 57" or by e-mail to **AML@idrbt.ac.in** so as to reach the Institute latest by **May 09, 2022.**

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