Univ. of Houston, COSC 4371 Project Guidelines, Multiple Deadlines below

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All work must be your own. You may discuss the topic with only the other students in class, the TA, and the instructor, but you cannot copy materials from anyone or anywhere (journals, magazines, conferences, web, etc., this list is not exhaustive).

The task is to either propose your problem or bid on the list of projects that we have developed. If you want to propose your own problem, the following steps apply.

1. Select a cyber security problem that has been tackled using zero or only one or at most two of the data analytics techniques out of the four types of data analytics approaches: data mining, natural language processing, machine learning and statistics. There must be a clear plan to obtain a dataset for the problem: either one is already available or it is feasible for you to collect it itself (I will call this "the data plan"). You must turn in: the security problem, the dataset plan, which two techniques will be employed and a brief plan on how they would be employed ("the action plan"), and the results of the literature search (your search queries, search results and databases used in the searches).

2. If the problem is not approved for any reason (e.g. if it is not relevant to the course, or it is too well-studied, or if it is not an important problem), we will assign a project from our list based on your ranking.

3. Apply, to the approved problem, at least two different type of analytical approaches that have not been employed so far. Deadlines for these so that you can plan ahead are:

4. Document all your work and share it with the rest of the class in a presentation as given in the schedule.

5. Also, submit a ranked list of the projects on our list.

If you want to bid on the list of projects: each team must submit two bids and a ranked (highest preference first) list of the remaining projects on our list. A template for the bid also uploaded in Canvas.

Formatting. The problem, the data plan, the action plan, and the results of the literature survey should be turned into an organized and readable document of no more than 5 pages. Note that if your problem already has 4 pages or more of references on it, it is probably too well studied. Use only one side of each sheet, single spacing and 1 inch margin on all sides with no less than 10 point font. Follow MLA or computer science literature format for the bibliography section of the paper carefully. Remember to include your name and email address (one that you check at least once daily) on all submissions. Some starting points. Besides the Google Scholar and the DBLP databases, the following journals and conferences are known to publish Security research and may be used as starting points for a literature survey (this is not an exhaustive list): ACM Transactions on Information and System Security, Journal of the ACM, Journal of Computer Security, IEEE Transactions on Dependable and Secure Computing, IEEE Transactions on Information Security and Forensics, International Journal of Information Security, IEEE Symposium on Security and Privacy, ACM Conference on Computer and Communications Security (CCS), USENIX Security Symposium, IEEE Computer Security Foundations Symposium (used to be a workshop in the past), Network and Distributed System Security Symposium (NDSS), Annual Computer Security Applications Conference (ACSAC), and European Symposium on Research in Computer Security (ESORICS).

Deadlines

- Deadline for submitting a problem/bids on our list + ranked list of remaining projects on our list: Sept. 23, 4 PM CST.

Note: All ACM papers are available in ACM Digital Library and IEEE papers are in IEEE Xplore. The UH library has these two databases (look under Databases at info.lib.uh.edu web page). N.B. Do NOT tear papers from books or journals in the library! The library has excellent CDROM databases and free printing facilities and low cost copying services.