CECS 327: Introduction to Networks and Distributed Computing

Paper/Presentation

Description

Each team needs to present four research papers in detail. Each research paper needs to be at least four pages long. If there is a situation where the research papers are not long enough then you may consider including more papers. The papers can be obtained from the ACM library. You may need to consider search the related papers from each paper's reference and search the Internet for useful information if necessary (no copy and paste). The papers should have been published in the past three years maximum.

Each presentation takes 15-20 minutes followed by about 10 minutes Q&A. You should prepare the talk very well as it contributes 20% towards your course grade. Presentation clarification and organization aside, the key is the IN-DEPTH understanding of the problem and the technical work.

You will also need to write at least six pages long paper about the topic that you presented. The paper needs to be a summary of the research papers that you picked as well as any other necessary information to support the topic. The paper must be written in a single space and APA format. It's very important to get the citation right, including the inline citation. BeachBoard is having a feature to look for plagiarism and it will be activated by default when you submit your paper and presentation slides. Please make sure to take a look at the Cheating and Plagiarism section in the syllabus.

Note: keep in mind that the research papers are usually very dense, and it requires to be read more than one time in order to digest the scientific materials

Choose one of the topics below for your research which you will prepare an in-class presentation and write a summary paper.

1. Digital Twin
2. Smart Cities
3. Ontology → (for DB and AI lovers)
4. Database architecture
5. Smart Factories
6. Internet of Things (IoT)
7. IoT Data Anonymization
8. Web of things

You may tackle these topics from a technology standpoint view like (security, privacy, artificial intelligence, computing, etc).

Here are some examples for your search. You may come up with something different:

a. Digital Twin for smart city
b. Digital Twin for factories
c. Data architecture for Digital Twin
d. Ontology for Digital Twin
e. Ontology for smart city
f. Internet of Things for city water systems
g. Data privacy and data security in smart city
h. Smart City systems/enterprise architecture

General guidance on presentation content and your summary paper:

1. Introduce a background and context that are sufficient to understand the topic you are presenting.

2. Give motivation for a problem that needs to be solved. Emphasize the importance of the problem.

3. Define a problem. Illustrate the problem using an example(s).

4. Overview proposed a solution(s).

5. Present solution details. Give an example(s) of how a solution(s) works.

6. Make a conclusion and discuss future work.

7. A demonstration of a paper solution or a related solution will be given additional credit. Check the "extra credit" section

8. Be prepared to answer questions about your presentation and beyond its scope. Make sure you understand the topic well.

9. Be creative, organized, and focused. Ask and encourage questions from the audience. Practice your talk beforehand!

Schedule:

Week	Group	Days
4 02/09/20	1,2	Wednesday
5	3,4	Wednesday
6	5,6	Wednesday
7	7,8	Wednesday
8	9,10	Wednesday

9	11,12	Wednesday
10	13,14	Wednesday
11	15,16	Wednesday
12	17,18	Wednesday
13	19,20	Wednesday
14	21,22	Wednesday
15	23,24	Wednesday
		Some teams may need to present during the office hour if they don't have time to present during the lecture

Note:

If we encounter any holiday, class cancelation, exam, etc during the day of your presentation then it will be shifted to the next day.

Submission

Submit all the following documents in a zip folder immediately after your presentation.

1. The four research papers
2. Your summary paper
3. The slides that you presented in PPT format

The folder needs to be named as the following (TeamX_SmartCity). You can replace X by your team number and "SmartCity" by the topic of your presentation.

One team member needs to submit the zipped folder on behalf of the team.

Each team member needs to submit their team evaluation separately.

Note: failure to follow these instructions will make you lose points

Grading

50% of your grade for the presentation will be given by the instructor, the other 50%– by your peer student(s). The grading sheet will be available on the BeachBoard.

Extra Credit

The extra credit project is designed for students who need to challenge themselves and prepare for getting a job after graduation. The project is going to be based on delivering a demo by the end of the semester related to your research topic. The demo can be implementing the same

logic that was mentioned in the research papers (ex: algorithms) or a new idea that you would come up with as a continuation to the research papers. If you decide to do the "extra credit" the project you must first consult with the professor about the idea and get the approval. You also need to report the progress at least once a week through a zoom meeting. The demo due date is at the last day of the semester and it's not tied to your presentation due date.

Other Notes

Group grades will not be given. Each group member will be graded individually – thus free-riding will not be rewarded.