CSCE 590-1: Trusted AI
Prof. Biplav Srivastava, Fall 2021

Final / Take Home/ December 02, 2021/ Instructions

- Return answer to final exam as report (.pdf) by 1:00 pm on Tuesday, December 7, 2021. Post the report as sub-folder "FinalExam" in your shared folder (e.g., Google folder mentioned in spreadsheet) and confirm it being done by email to biplav.s@sc.edu.
- Ask any question by email or on slack.

Total points = **100**, Obtained =

Student Name:

Theme 1: Understanding of projects presented by students
[40 + 40 = 80 points]

Instructions:
1. Look at the presentations at:
https://drive.google.com/drive/folders/1v2hkeFR6dBVZSyxnMY2vebjuDsUW_phl?usp=sharing
2. Pick TWO project presentations – one presented before you and one after. For the first and last presentations, the before (after) is the last (first).
3. You may also go through project's previous updates in the course as necessary.
4. Now answer the questions about the project

Questions:

1. Summarize the project BEFORE you based on information in the project presentation.
[5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 40 points]

That is cover:
1. Problem: what was it and was it important ?
2. User(s): who are they and what are they doing to solve the problem before?
3. AI Method(s): what methods were used in the paper? Summarize the method and how it was applied for the problem. (Example: random forest was the method and it used with 23 features and 1 class feature).
4. Data: What data was used, where was it obtained, how was the data cleaned?

5. Evaluation: What metrics were used? What was the result obtained?
6. Trust/ Human Values: What trust/ fairness/bias/ privacy issues were relevant for the problem ? What (subset) were considered ?
7. Human-AI: How trust was sought to be built in the solution built? Example: was any explanation method used? Was evaluation believable?
8. Project's impact: will the user(s) be willing to use the implemented solution (proposed by the student) now that it is done?

2. Summarize the project AFTER you based on information in the project presentation. [5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 40 points]
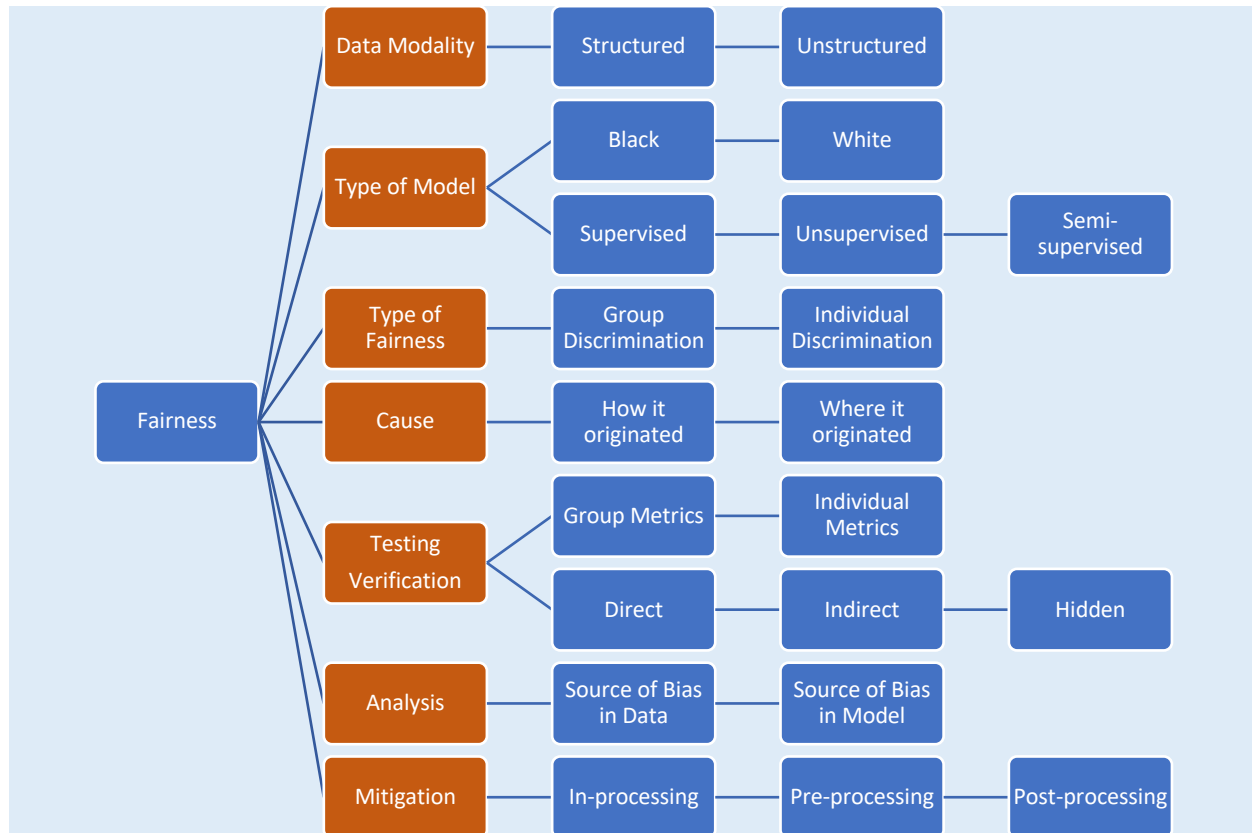
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Theme 2: Understanding fairness
[14 + 6 = 20 points]

Consider the fairness dimensions introduced by the invited speaker in Oct 2021.

3. Explain each dimension (orange box) briefly in your own words (2-3 lines). [14 points]

4. Consider the problem of assigning order in which project presentations have to be done. Suppose a secret AI algorithm assigns the order. What type of fairness will you be concerned about and why ? [6 points]