Article Report Instructions

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Overview

Learning to communicate ideas clearly in writing is extremely important in the mathematical sciences. Before you can write your own technical papers successfully, it is imperative that you learn to properly read the technical papers of others. For this presentation, you will follow specific guidelines to help you evaluate a technical paper involving a mathematical model and present important aspects of it to the class. You should also asks questions of the class and get them involved in a discussion of the paper.

Find a journal article which describes the mathematical modeling and solution of a some questions about a Sars-Cov-2 problem (hopefully of interest to you). A week or more before class, tell the class what article to read for your presentation so they have some familiarity with it.

Present the following topics about the article you have chosen:

1. What is the question being asked?
2. What modeling approach is being used?
3. What assumptions are made?
4. How is the model formulated (how did they go from the question to the mathematics)?
5. How is the problem solved (analysis, computation, verification)?
6. What is the answer to the original question?
7. Overall evaluation:
   (a) Is the article well written (clear, understandable, includes enough detail)?
   (b) Were the assumptions justified and reasonable?
   (c) Was the chosen model a good one (capturing salient features, numerically stable)?
   (d) How could the problem be extended in an interesting way? As you read and discuss the article with your partner, notice how the paper is organized (abstract, introduction, background, methods, conclusions, etc.). You'll start to see patterns as you read more of them, and you'll get a good idea of how your own original project should be presented.

Guidelines for this presentation. You will be working in groups. Each of you should have an equal hand in creating the presentation and also in presenting it. If you are not synchronous, you should create a video presentation of you talking over your slides. Please make sure to introduce yourselves. Make sure to get others involved in the discussion if you are synchronous. If you are asynchronous, submit questions for the group.

Suggested Articles if you are having trouble finding some

1. Agent-based Model in University Environment: https://arxiv.org/pdf/2006.03175.pdf
2. Testing interventions working paper from someone at the Richmond Fed: https://www.richmondfed.org/-/media/richmondfedorg/research/economists/bios/pdfs/hornstein_covid19_paper.pdf
3. Modeling study about Masks (some of this is complicated but you should be reading for main ideas and techniques) https://www.sciencedirect.com/science/article/pii/S2468042720300117