Weekly Progress Report

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Main Focus

Intensive Reading - Consensus Problems in Networks of Agents With Switching Topology and Time-Delays.

- Progress: I have read the abstract, Part I to III.

Insights

- Reading ability: This is the first time for me to intensive read a paper. I have learnt a number of words about automatic and math field.
- Knowledge Learnt: Basic Graph Theory Concepts; Relearning and the Application on Matrix Analysis;
- Developed Skills: Using ChatGPT to assist with reading paper.

Idea in the paper

Concept

I have learned the concepts of "agree" and "reaching a consensus" and their difference:

> We say nodes v_i and v_j *agree* in a network if and only if $x_i = x_j$.
>
> We say nodes of a network have *reached a consensus* if and only if $x_i = x_j$ for all $i, j \in \mathcal{I}$.

Note: *to agree* is a node-to-node status which focuses on the locality. While "*to reach a consensus*" is a global status that must satisfy...

Reflections

I gained some valuable insights from this week's learning process. First, when encountering unfamiliar terms, I've learned that continuing to read often leads to clarity, as the answer might be present later in the context. Secondly,

I realized the need to bolster my coding skills; although I can identify and correct errors in programs written by GPT-4, I am not yet capable of coding independently.

Plans for Next Week

- Complete the neural network and deep learning course on Bilibili.
- Resolve the issue with the T-S neural network program.
- Continue reading and understanding the paper on *"Consensus Problems in Networks of Agents With Switching Topology and Time-Delays."*

References

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