

Computational Social Choice (Overview and axiomatic method) Assignment

Lecture delivered on: 10:30~12:00, October 17th, 2023

Assignment Deadline: 12:00, October 31st, 2023

Max Points: 10 points

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Answer the following questions while providing the necessary explanation.

1. What are the means by which we can make social choices in modern society?
2. What are the differences between social choice functions and social welfare functions?
3. Give examples of aggregation procedures used in social choice theory.
4. Which criterion of social choice often fails when the voters' preferences are cyclical?
5. Why is Arrow's impossibility theorem so important?
6. What are the key properties of voting rules?
7. What does "monotonicity" mean in the context of voting rules? Explain with an example.
8. Are there any real-world cases for the "impossibility theorem"? Give examples.
9. What are the most essential axioms for a democratic electoral system?
10. How can computational social choice theory benefit the development of online platforms?

For any questions or requests, feel free to contact me at rafik.hadfi@i.kyoto-u.ac.jp.