

Voting Representation in Social Networks Using Rough Set Techniques

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Abstract : Social networking involves use of an online platform or website that enables people to communicate, usually for a social purpose, through a variety of services, most of which are web-based and offer opportunities for people to interact over the internet, e.g. via e-mail and 'instant messaging', by analyzing the voting behavior and ratings of judges in a popular comments in social networks. While most of the party literature omits the electorate, this paper presents a model where elites and parties are emergent consequences of the behavior and preferences of voters. The research in artificial intelligence and psychology has provided powerful illustrations of the way in which the emergence of intelligent behavior depends on the development of representational structure. As opposed to the classical voting system (one person - one decision - one vote) a new voting system is designed where agents with opposed preferences are endowed with a given number of votes to freely distribute them among some issues. The paper uses ideas from machine learning, artificial intelligence and soft computing to provide a model of the development of voting system response in a simulated agent. The modeled development process involves (simulated) processes of evolution, learning and representation development. The main value of the model is that it provides an illustration of how simple learning processes may lead to the formation of structure. We employ agent-based computer simulation to demonstrate the formation and interaction of coalitions that arise from individual voter preferences. We are interested in coordinating the local behavior of individual agents to provide an appropriate system-level behavior.

Keywords : voting system, rough sets, multi-agent, social networks, emergence, power indices

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