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Patent Search

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Abstract:

Enhancing Social Network Analysis through Graph Labeling Techniques Abstract The Petersen graph, a well-known structure in graph theory, presents unique charact make it valuable for exploring complex relationships in social network analysis. This research investigates the application of Petersen graph labeling techniques to mo analyze social networks. Given its non-planar, highly symmetric nature, the Petersen graph serves as an ideal candidate for examining intricate connections and hiera social structures. The study focuses on the use of vertex and edge labeling schemes on the Petersen graph to identify key actors, reveal community structures, and as network robustness. Additionally, the research explores how these labeling techniques can enhance the detection of anomalies and influence patterns in social netwo applying the principles of Petersen graph labeling, this paper aims to contribute to the development of more refined and effective methods for analyzing and interpre networks. Empirical results and case studies highlight the practical implications and potential benefits of this approach in real-world scenarios. Key words: Petersen g labeling, social network analysis.

Complete Specification

Description:DESCRIPTIONS:

I.Introduction

The concept of prime labeling was initially introduced by Roger Entringer, and it was further discussed by Tout, A.N. Dabboucy, and K. Howalla. In 1973, Granovetter seminal paper introduces the concept of "weak ties" and argues that these ties, while less intense than strong ties, are crucial for social network connectivity and information flow. The strength of weak ties lies in their ability to connect disparate social groups, facilitating access to novel information and opportunities. In 1978 C. Freeman foundational paper discusses different types of centrality measures, such as degree, closeness, and betweenness centrality, which are used as vertex lal identify influential nodes in social networks. Coleman's paper delves into how strong ties within social networks develop and their impact on social capital. He explo mechanisms behind the formation of strong ties and their role in reinforcing trust and collaboration within communities in 1988.

Wasserman, Stanley and Katherine Faust article (1994) traces the development of social network analysis from its early beginnings to its current state. Wasserman Faust provide a historical perspective on key theoretical contributions and methodological advancements in the field. In 2001, Ronald S. Burt discusses the concept structural holes in social networks and how vertex labels can be used to identify and analyze these gaps, which represent opportunities for brokerage and influence Scott handbook provides a comprehensive overview of social network analysis, including theoretical foundations, methodological approaches, and practical applica Scott discusses various techniques for analyzing network structures and dynamics, offering insights into both qualitative and quantitative aspects of social networks 2000, Berkman and Kawachi review research on the relationship between social networks and health outcomes. They analyze how social support, social integration

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