Paper Review

“ A Survey of Parallel Sequential Pattern Mining ”

1. Summary

Sequential pattern mining (SPM) is used in a wide variety of real-life applications. However, it is more complex and challenging than other pattern mining tasks. Nowadays, parallel computing is the key to improving the performance of computer programs. The key is to parallelize it, in tasks, data, and hybrids.

Another is distributing it. Map-reduce and latency are the main challenges.

To achieve parallel computation, it can use multi-core, multi-nodes, GPU, FPGA, and some software frameworks.

The paper then introduces some state-of-the-art research. not detailed in this paper review.

There is also some open source software, thanks to years of research in this field.

The challenges are:

1. Complex types of sequence data
2. Multi-modal data
3. Dynamic sequence data
4. Scalability
5. Privacy

There are many types of parallel and distributed systems, such as multi-core computing, grids, peer-to-peer (P2P) systems, ad-hoc networks, cloud computing systems, and the MapReduce framework. The new opportunities are:

1. New applications
2. Advanced parallel computing environment
3. Developments from hardware and software
4. Keeping pattern short and simple
5. Utilizing deep learning technology
6. Other important issues

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