



THE UNIVERSITY OF
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Department of Statistics

MASTER'S THESIS PRESENTATION

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Graph Partitioning for Large Real-World Dataset

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ABSTRACT

Graphs are the form of various real-world datasets, from social networks to online reviews. People have been studying structures of these graphs. However, the size of such datasets is going beyond the capability of traditional analysis tools recent years. Most of the time, our interests are limited to significant features of the graph, as well as important nodes and edges, instead of many other details. We introduce several traditional semantic graph compression schemes. We do two kinds of multilevel graph partitioning. One of them is based on AMG-inspired coarsening, adjusted by a more reasonable measure called algebraic distance. The other is multilevel graph partitioning based on a fast matrix factorization method - MMF. We apply these two methods on a selected large dataset and do a brief comparison between them.

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