

Master Project

Covariance Matrix Approximation Using Graphical Models

Duration: 4 months

Mentors at USI: Prof. Olaf Schenk (USI), Aryan Eftekhari

Working place: Lugano, Switzerland

Prerequisites

The candidate should have working experience with Matlab, C++, and MPI and have completed coursework in linear algebra and statistics.

Recovering the (inverse) covariance matrix is a fundamental task in the modern multivariate analysis. In this project, we are concerned with a sparse approximation of the (inverse) covariance matrix. This task is challenging due to the inherently high degree of uncertainty in the estimate when the number of samples is limited. A sparse approximation of the covariance matrix is essential in high-dimensional settings, and can also have a significant impact on the accuracy of the approximation.



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Contact information and application

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