
Background
Understanding the patterns of network traffic both in core Internet and mobile edge is important for development of the future systems. Also in the operational domain there are huge resource management benefits if the network traffic could be predicted even for short time periods.

Tasks
In this thesis you will first review and learn some key machine learning and statistical methods for time series analysis. With your supervisor you will select the most promising methods and execution libraries (such as using H2O) for network data analysis. The data you will analyze will be real operational data from different network domains. Depending on the student interests the work can be more theoretical and Internet traffic oriented, or we can steer work also to collect own data from Wi-Fi networks for analyzing with the selected pattern recognition tools.

Other Information
In this thesis topics you have an opportunity to learn what kind of traffic traces are collected from real world networks for operational efficiency optimization. You have an excellent possibility to learn how the modern data mining and machine learning based data analysis is conducted with industrial scale data and tools. The work is a part of our large research program on understanding the development and operational conditions of very large scale networks.

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