

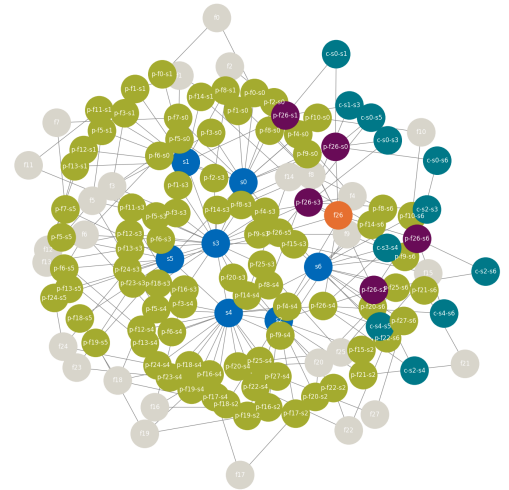
Thesis
M.Sc.

IDP,
Guided
Research

Machine-Learning- based Delay Prediction Capability Com- parison

Motivation

Machine learning plays an increasingly important role in network design and management. Flow metrics, such as delay bounds, are a key performance indicator of a well designed network. Delay bounds can be obtained by measuring the real-world setup, by simulating, by emulating, or by utilizing formal methods. The goal of this thesis is to compare how well machine learning approaches are able to predict delay bounds based on real-world measurements as well as simulations of different networks. To this end you will be provided with two datasets, one from real-world measurements and one from simulations. Your task will be to design a machine learning approach that can predict delay bounds for both dataset with similar accuracy.



Your Task

- Familiarize yourself with the two datasets
- Design and implement a machine learning approach
- Evaluate and fine-tune the approach
- Compare your approach with state-of-the-art works

Requirements

- Hands-on experience with machine learning, preferably PyTorch
- Basic knowledge of networking
- Self motivated work approach

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