Chair of Communication Networks
TUM Department of Electrical and Computer Engineering
Technical University of Munich

Master's Thesis

Machine Learning approach for resource distribution in a 5G Network: Edge Network Slicing for In-Flight Connectivity

5G Networks are anticipated to support the tremendous growth in the traffic demands and the heterogeneity of future applications. In that regard network slicing paves the way towards programmable and flexible networks. On the other hand, delay critical applications require an additional boost on the performance which solutions like Mobile Edge Computing (MEC) or network caching can provide.

In this thesis the student shall focus on the algorithmic part of the joint network slicing and edge caching. A solution to efficiently manage the resources in order to provide the required performance is needed. To this aim, learning approaches could potentially be utilized for the resource allocation in order to further improve the performance.

Prerequisites

- Good knowledge of simulation environments such as Matlab, Python.
- Good mathematical background. Basic knowledge of network slicing and optimization algorithms is a plus.

Advisors

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