Master Thesis - XAI Visualization of Machine Learning for 5G Radio Networks

Background
Mobile networks are used all over the world and are the corner stone for the networked society, where everything shall be connected. To support the vast amount and diversity of data expected in future networks, Ericsson are developing products to drive and support the networked society. The subjects for Master Thesis are defined to investigate and develop algorithms, architecture, tools etc. to support huge increase of speech, data and massive IoT for Radio Access Networks.

Thesis Description
Machine Learning in Ericsson’s radio networks is a reality. Due to its abstract nature it is difficult to get a humanistic view of the algorithms. In order to help understanding the Machine Intelligence, it would be beneficial to visualize and explore the models' behavior and performance through aiding software.

The thesis work is proposed to cover:

Develop a standalone software which can import Ericsson’s product data, communicate with existing Machine Intelligence micro service and retrieve model information for visualization and assessment. Due to the nature of the data, the prerequisite is that software is fast and effective, and built with accepted practice and libraries, such as C++ and Qt.

The thesis will be concluded with a result presentation for the Ericsson team.

Qualifications
This project aims at students in electrical engineering, computer science, computer engineering or similar. Background in machine learning and embedded Linux is preferred.

Extent
1-2 students, 30hp each

Location
Ericsson AB Mjärdevi, Linköping

Preferred Starting Date
Spring 2020

Contact Persons
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