Master Thesis -
Architecture Evaluation for Machine Learning in a Containerized Cloud Environment

Background
Mobile networks are used all over the world and are the cornerstone 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
When machine learning is applied in a system the activities can be divided in several steps. The steps may for instance include: data collection, training, model optimization, prediction (inference), model evaluation and so on. If this is done in a containerized cloud environment there will be many alternatives for how to deploy these steps in different containers. Different alternatives will have different pros and cons regarding scalability, performance etc.

The thesis work is proposed to cover:

- Propose a set of different deployment alternatives
- Implement at least one alternative and evaluate scaling and performance

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 2021

Contact Persons
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