Master Thesis – Green Software Development

Background
Mobile networks are used all over the world and are the cornerstone for the networked society, where everything will be connected. To support the vast amount and diversity of data expected in future networks, Ericsson develops products to drive and support the networked society. The subjects for this Master Thesis is 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
Software programming languages like GO and Python are some of the dominating choices for building cloud native u-Services. Ease of use and development speed are some of the key attributes, but what about long term energy aspects? A compiled language is often compiled several times during development and integration versus an interpreted language where that resource (CPU/memory) usage is pushed to when the applications are actually used. This thesis work aims to take a holistic approach to the development time, resource usage during the Software development and deployment phases for a compiled and interpreted language, preferably a range (C++, Rust, Go and Python).

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.

Extent
1-2 students, 30hp each

Location
Ericsson AB Mjärdevi, Linköping

Preferred Starting Date
Spring 2023

Keywords
SW development, Mobile Telecommunication, Optimization.

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