Linnéuniversitetet
Linnaeus University

Bachelor/Master Thesis

Thesis Topic	**Requests Patterns for Service-oriented self-adaptive software**
Motivation	Service-oriented software achieves its expected behavior by executing a combination of service requests. When there are multiple providers of the same service, the service-oriented application can choose the most convenient provider each time. Service providers have their own development cycles, availability issues, and pricing policies; therefore, the most convenient service to request varies over time. A service-oriented self-adaptive software can modify its policy for requesting its necessary services to one provider or another depending on the changing properties of the service providers.
Tasks	During the thesis work, you will: 1) Implement a simulator of a generic and customizable service-oriented software. 2) Use a Big Data technology to analyze the behavior of service providers over time. 3) Implement the self-adaptation engine of the service-oriented software, which decides the optimal policy to requests the necessary providers. The decision is based on the results of the analysis in 2).
Prerequisites *	Software Engineering (2DV603) Software Architecture (2DV604) Java Knowledge of self-adaptive software Motivation to work on the problem At Master Thesis level, also Architectures for Service-based Systems (4DV609)
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