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Call for Bachelor Thesis

“Theories about World Representations for the Internet of Things”

(in English/German)

What is the topic?

This Master thesis is about the philosophical foundations of ontologies and the Internet of Things.

In the past, ontologies have been used by philosophers and computer scientists to model the world as it is (i.e., a current state of some parts of the world). However, little research has been made how to come up with these ontologies and how to establish a common understanding of entities, attributes, relations, and classes in the model of the world. This becomes in computer science more and more important, since in the Internet of Things, agents (devices, etc.) can build their own perspective and perception of (parts of) the world. For instance, how can Amazon's Alexa and Apple's Siri synchronize their perception and notions to refer to the same entities?

In this thesis, the student will consider various semantic theories, such as extensional semantics, intentional semantics, and cognitive/distributional semantics and review it from the perspective of the Internet of Things. Note that this thesis does not contain an implementation and evaluation. The focus is instead on the conceptualization and argumentation (i.e., an extension of [1]).

More information can be provided in a first meeting.

[1] http://dbis.informatik.uni-freiburg.de/content/team/faerber/papers/Theories_World_CARLA2018.pdf

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