UNIVERSITÄT BIELEFELD

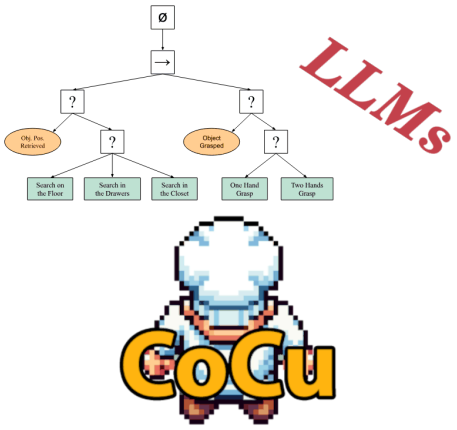
Faculty of Technology

SOCIAL COGNITIVE SYSTEMS

AG Kognitive Systeme und soziale Interaktion

Behavior Trees for Human-Agent Collaboration: Generate, Adapt, Use with Humans and LLMs

Bachelor/Master – This thesis explores the use of behavior trees (BTs) for modeling and supporting collaboration between humans and artificial agents. The project focuses on methods for generating and adapting BTs, with large language models (LLMs) serving as tools to support these processes. Human users may guide the adaptation of BTs with the assistance of LLMs, or the project may focus on representing human behavior within BTs. Implementation will be in Python, with evaluation in cooperative scenarios involving human participants.



Tasks

- Investigate and implement methods for generating and adapting behavior trees for human-agent collaboration.
- Integrate LLMs as tools to support BT creation or adaptation.
- Evaluate the approach in cooperative scenarios involving human users.

Your Profil

- Programming skills in Python.
- Interest in AI, agent-based systems, or human-computer interaction.
- Motivation to learn about behavior trees and work with LLMs.

Interested?

If you are interested or have further questions, please send an email to `fschroeder@techfak.uni-bielefeld.de`.

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