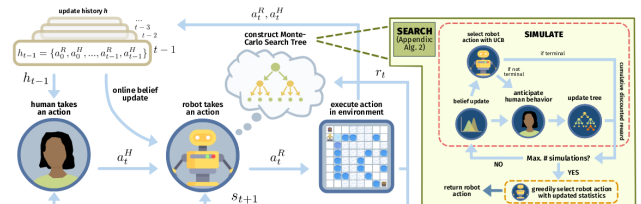


Exploring Mixed-Initiative Human-Agent Teaming with Online Bayesian Adaptation

Master - We invite applications for an open thesis on a novel approach to “Mixed-Initiative Human-Robot Teaming under Suboptimality with Online Bayesian Adaptation” (Natarajan, 2024)^a. This research will involve investigating how human-agent teams can effectively collaborate under sub-optimal conditions using our newly developed overcooked-like environment, “Cooperative Cuisine”. The goal is to enhance teamwork through adaptive strategies, utilizing Bayesian methods to dynamically adjust to evolving team performance.

Tasks

- Review and analyze the recent paper on mixed-initiative human-robot teaming and online Bayesian adaptation.
- Develop and implement experiments within the Cooperative Cuisine environment to test the proposed approach.
- Collect and analyze data on team performance under various suboptimal conditions.
- Adapt and refine Bayesian models to improve the adaptability of robot behavior in real-time.



Interested?

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

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^a<https://dl.acm.org/doi/10.5555/3635637.3663005>