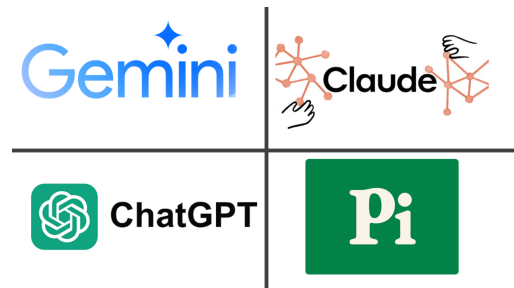


Exploring LLM-Based Action Planning in a “Cooperative Cuisine” Environment

Bachelor/Master - This thesis aims to explore the potential of Large Language Models (LLMs) in planning approaches within a dynamic and cooperative environment, inspired by the game Overcooked, named Cooperative Cuisine. The research will delve into various aspects including multi-agent collaboration, environmental complexity, and timing strategies. Students will have the opportunity to extend and modify the environment to test different planning methods and evaluate the efficacy of LLMs in enhancing cooperative game-play. This study builds on recent advancements in LLM capabilities, offering a cutting-edge exploration into AI-driven planning.



Tasks

- Analyze existing LLM planning approaches and their application to cooperative environments.
- Design and implement extensions to the Cooperative Cuisine environment to introduce new challenges.
- Evaluate the performance of different planning methods in complex and dynamic scenarios.

Your Profile / Learning Goals

- Proficiency in programming languages such as Python.
- Ability to conduct independent research and analyze complex systems.
- Keen interest in exploring innovative AI applications in multi-agent and cooperative settings.

Interested?

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