

An LLM-based Ubuntu User

Description

Large language models (LLMs) have transformed how we interact with technology, allowing users to communicate with systems using natural language. Ubuntu, a popular open-source operating system, provides a powerful environment for exploring the use of LLMs as intelligent agents.

This master topic focuses on using LLMs as agents that can directly control and manage Ubuntu. The goal is to develop an LLM-based agent that can perform tasks such as configuring system settings, installing software, troubleshooting issues, and managing resources—entirely through natural language commands. This research will explore how LLMs can streamline system management, making Ubuntu more intuitive and user-friendly, while also enabling greater automation and efficiency for users at all levels.

For application please send me an email with title “Master Thesis Application: An LLM-based Ubuntu User”. Please also attach your resume and transcript of records in the email. An motivation letter is NOT required.

Tasks

- Literature review on LLM-based agent systems [1].
- Design LLM-based interactive workflow.
- Evaluate the performance of different LLMs for such tasks.

References

- [1] Charles Cao, Feiyi Wang, Lisa Lindley, and Zejiang Wang. Managing linux servers with llm-based ai agents: An empirical evaluation with gpt4. *Machine Learning with Applications*, 17:100570, 2024.



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Supervisor:

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Research project:

MANNHEIM-CeCaS

Type:

MA

Research area:

Generative AI, Large Language
Models, LLM Agent, Ubuntu

Programming language:

Python

Required skills:

Ubuntu, LLM deployment, LLM
Agent, Automation Tools,
Programming language

Language:

English

**For more information please
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