Role of LLMs in Software Configuration (SS2024) - Seminar Automated Software Engineering

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In the realm of automated software engineering, the emergence of Large Language Models (LLMs) has sparked significant interest and discussion, particularly in their role within software configuration. LLMs possess remarkable capabilities in natural language understanding, generation, and pattern recognition. These models can potentially revolutionize how software configurations are managed and tackled, offering solutions that range from assisting in decision-making processes to detecting misconfigurations. Motivated by the complexities of modern software systems, which often involve intricate configurations across various platforms, environments, and technologies, researchers and practitioners are exploring the role of LLMs in software configuration. The integration of LLMs in software configuration raises intriguing questions and challenges, which we want to understand.

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$$
\begin{aligned}
c &= |d| + |e| \\
&\stackrel{(a)}{=} d + e \\
&\stackrel{(b)}{\geq} \sqrt{f} \ ,
\end{aligned}
\tag{1}
$$

where the equality (a) results from the fact that both d and e are positive while (b) comes from the definition of f.

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Table 1 shows an example of table.

Fig. 1: Any questions?

ID	age	weight
1	15	65
2	24	74
3	18	69
4	32	78

Table 1: Age and weight of people.

2 Citation

References

[1] Shantanu Mandal, Adhrik Chethan, Vahid Janfaza, S. M. Farabi Mahmud, Todd A. Anderson, Javier Turek, Jesmin Jahan Tithi, and Abdullah Muzahid. Large language models based automatic synthesis of software specifications.

[2] Shiwen Shan, Yintong Huo, Yuxin Su, Yichen Li, Dan Li, and Zibin Zheng. Face it yourselves: An llm-based two-stage strategy to localize configuration errors via logs.

[3] Xinyu Lian, Yinfang Chen, Runxiang Cheng, Jie Huang, Parth Thakkar, Minjia Zhang, and Tianyin Xu. Configuration validation with large language models.