Agent4SE Paper List

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The recent advance in Large Language Models (LLMs) has shaped a new paradigm of AI agents, i.e., LLM-based agents. Compared to standalone LLMs, LLM-based agents substantially extend the versatility and expertise of LLMs by enhancing LLMs with the capabilities of perceiving and utilizing external resources and tools. To date, LLM-based agents have been applied and shown remarkable effectiveness in Software Engineering (SE). The synergy between multiple agents and human interaction brings further promise in tackling complex real-world SE problems. In this work, we present a comprehensive and systematic survey on LLM-based agents for SE. We collect 106 papers and categorize them from two perspectives, i.e., the SE and agent perspectives. In addition, we discuss open challenges and future directions in this critical domain.

📄 Paper Link: [Large Language Model-Based Agents for Software Engineering: A Survey](#)

🗞 News

- **[2024/09/04]** We released the first version of our survey on arXiv.

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🖥️ SE Perspectives

Requirement Engineering

- [2024//04] **Elicitron: An LLM agent-based simulation framework for design requirements elicitation.** *Ataei et al. arXiv.*[[paper](#)]
- [2024/01] **Specgen: Automated generation of formal program specifications via large language models.** *Ma et al. arXiv* [[paper](#)]
- [2024/05] **MARE: multi-agents collaboration framework for requirements engineering** Jin et al. arXiv. [[paper](#)]
- [2023/10] **Advancing requirements engineering through generative ai: Assessing the role of llms** Arora et al. Generative AI for Effective Software Development. [[paper](#)]

Code Generation

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🤖 Agent Perspectives

Agent Framework

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📝 Citation

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1  To be filled
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🚌 Star History

FudanSELab/Agent4SE-Paper-List

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