# Article information:

[2105.01984] Software Engineering for AI-Based Systems: A Survey  
<https://arxiv.org/abs/2105.01984>

# Article summary:

1. AI-based systems are becoming increasingly prevalent in society, but there is limited knowledge on Software Engineering (SE) approaches for building and maintaining these systems.

2. A systematic mapping study was conducted to collect and analyze the state-of-the-art knowledge on SE for AI-based systems, considering 248 studies published between January 2010 and March 2020.

3. The most studied properties of AI-based systems are dependability and safety, with a focus on software testing and quality. However, areas like software maintenance are relatively neglected. Data-related issues are identified as the most recurrent challenges in SE for AI-based systems.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

对于上述文章的批判性分析，以下是一些潜在的偏见和问题：

1. 作者来源：文章中提到了每个作者的来源链接，这可能会引起读者对作者的潜在偏见。如果作者来自特定的机构或组织，他们可能有利益驱动或特定观点的倾向。

2. 文章范围：文章声称进行了系统性调查研究，但没有提供关于如何选择和筛选研究文献的详细信息。这可能导致选择性偏见，并排除了一些相关研究。

3. 缺乏证据支持：文章提到AI系统软件工程领域存在多种方法，但没有提供足够的证据来支持这些主张。读者无法评估这些方法是否真正有效或可行。

4. 忽视软件维护：文章指出软件测试和软件质量是最常研究的领域，但忽视了软件维护。这可能导致读者对于如何在AI系统中有效地进行长期维护和更新缺乏理解。

5. 缺失考虑点：文章没有涉及与AI系统相关的伦理、隐私和安全问题。这些是构建和操作AI系统时必须考虑的重要因素，但在该调查中被忽略了。

6. 缺乏反驳和平衡观点：文章没有提供对于SE for AI-based systems的潜在问题或限制的反驳观点。这可能导致读者得出过于乐观或不完整的结论。

综上所述，上述文章存在一些潜在的偏见和问题，包括作者来源、范围选择、缺乏证据支持、忽视软件维护、缺失考虑点以及缺乏反驳和平衡观点。读者应该谨慎对待该文章中提出的主张，并寻找更全面和客观的信息来评估SE for AI-based systems领域的研究进展。

# Topics for further research:

* AI系统软件工程领域的利益驱动和观点倾向
* 研究文献选择和筛选的选择性偏见
* AI系统软件工程领域方法的缺乏证据支持
* 对软件维护的忽视
* AI系统的伦理、隐私和安全问题的缺失考虑
* 对SE for AI-based systems的潜在问题或限制的缺乏反驳和平衡观点

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