

ASReview

❑ Overhyped AI with Limited Real-World Impact

ASReview markets itself as an AI-powered active learning tool to streamline systematic review screening. However, the reality reveals significant shortcomings that undermine its practical utility.

- The machine learning models are **fragile and domain-dependent**, often requiring extensive tuning and user expertise to avoid poor performance.
- It frequently suffers from **data sparsity and cold-start problems**, where insufficient initial training data leads to unreliable prioritization.
- The promise of drastically reducing screening workload is often **overstated**, with real-world time savings being marginal for many topics.

❑ Usability and Integration Challenges

- ASReview's user interface is **minimalistic but non-intuitive**, demanding steep learning curves for new users.
- It operates largely as a standalone tool, lacking seamless integration with popular reference managers, systematic review platforms, or collaboration tools.
- Export and import functionalities are limited, complicating workflow continuity and reproducibility.

⚠ Transparency and Trust Deficits

- The AI decision-making process is largely a **black box**, offering little explainability on why studies are prioritized or excluded.
- There are minimal options for user intervention or manual override of AI decisions without disrupting the learning process.
- This opacity raises concerns about bias, errors, and accountability in critical review stages.

❑ Limited Scope and Adaptability

- ASReview focuses mainly on title and abstract screening, neglecting later review stages such as data extraction or risk of bias assessment.
- It is less effective for reviews with highly heterogeneous studies, non-English literature, or niche topics with sparse data.
- The tool does not yet support multi-user collaboration natively, restricting its use in team settings.

❑ Maintenance and Community Support

- Being a research-driven open-source project, ASReview suffers from **infrequent updates** and variable documentation quality.
- User support channels are limited, placing the burden on individual teams to troubleshoot and

customize.

□ Final Verdict

ASReview offers an intriguing glimpse into AI-assisted review but remains an **immature, niche tool with significant limitations in usability, transparency, and real-world effectiveness**. Its deployment should be cautious and supplementary, not foundational.

Recommendation: Use ASReview only as an experimental adjunct to established review processes, not as a replacement for rigorous human screening and judgment.

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