Highlights:

1. AI aids search string development.
2. Best AI strategy incorporates ‘reflection’ and repeated prompting.
3. Best AI strategy has similar omission rates to humans in literature screening.
4. Low AI false negatives in screening trade-off against low false positives.

eTOC Blurb:  
Exploring AI's potential in systematic reviews, this study reveals ChatGPT's proficiency in evidence synthesis, closely aligning with human accuracy. It demonstrates how AI can expedite the review process, suggesting a future where AI-human collaboration is integral to rigorous, time-efficient research, paving the way for more informed societal decision-making.  
  
Science for Society:  
This study underscores the transformative role AI can play in streamlining systematic literature reviews, a cornerstone in evidence-based decision-making across disciplines. By demonstrating that AI can closely match human accuracy in filtering relevant studies, this research paves the way for more efficient, rigorous syntheses of scientific knowledge. Looking ahead, this work invites transdisciplinary collaboration, combining expertise in AI, data science, and various research fields to further refine these tools. The potential societal impact is substantial; policymakers, practitioners, and researchers can leverage these advancements to more rapidly inform actions on urgent issues related to environmental management.