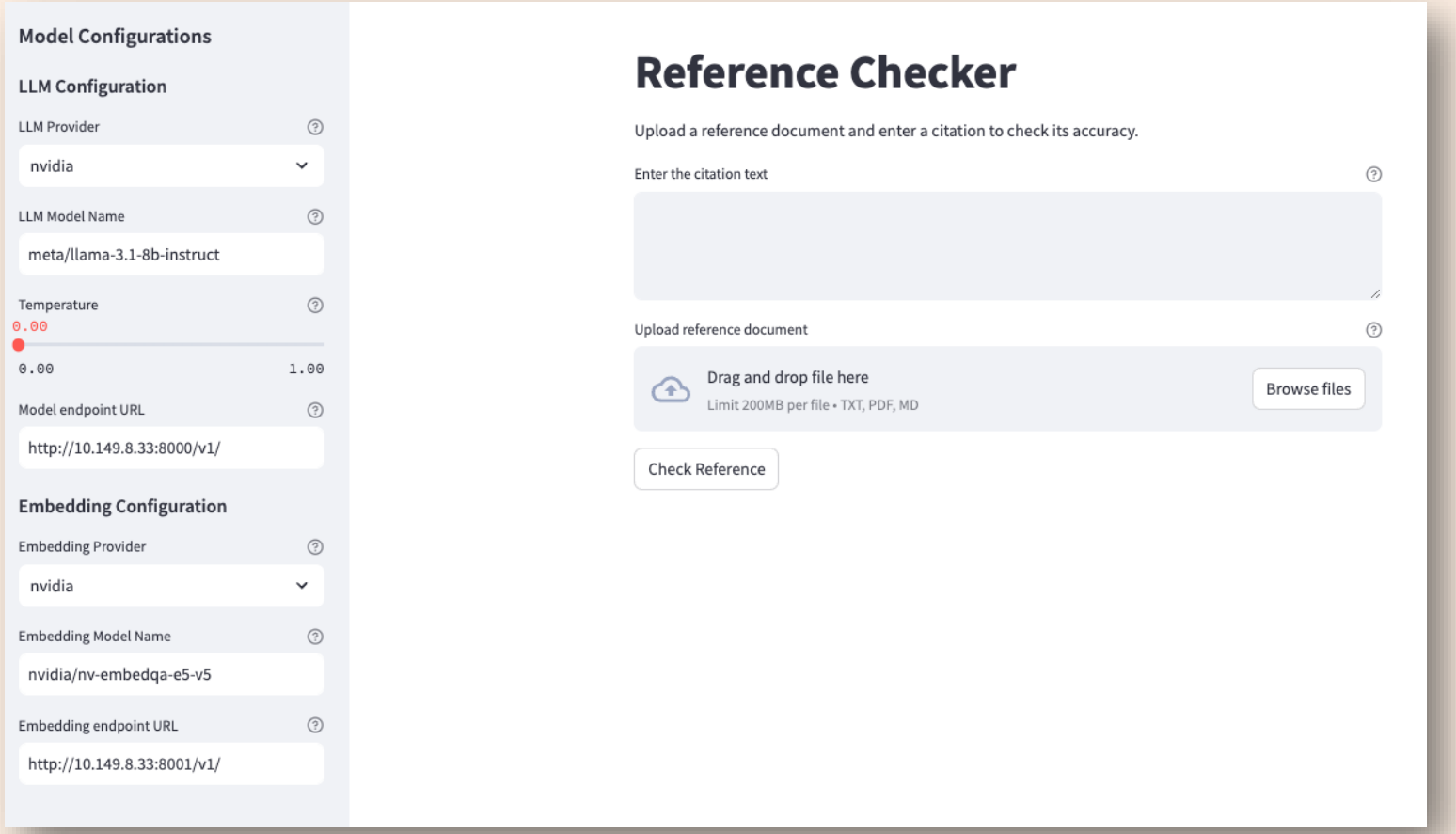
AI Reference Checker

A citation validation tool for AI-generated content and academic research



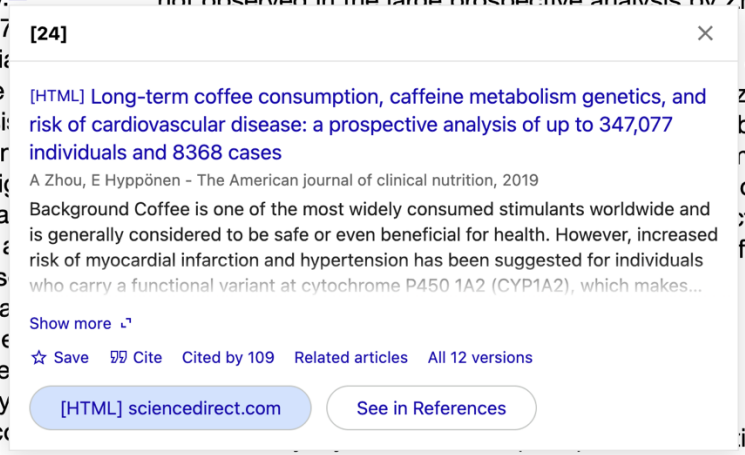
How can we ensure these citation statements are accurate by the referenced document?

Example for citation search

by 11%, 7%, and 22%, respectively (P=0.013) compared to those who consumed 1 to 2 cups of coffee per day.[24]

In a meta-analysis of 17 studies involving 233,617 pants, Mo et al (2018) noted an increase in myocardia tion among males who consumed >3 cups of coffee this effect was not observed in females.[25] Inconsis have also been seen among elderly males and fer study by van Woudenbergh et al (2008) revealed a sig reduction in coronary calcification in elderly (mean a years) females with moderate (3 to 4 cups per day) a (>4 cups per day) coffee intake compared to thos daily intake of ≤3 cups.[26] The investigators specula the phytoestrogens in coffee could partly replace e stores in postmenopausal females, leading to a de incidence of atherosclerosis. This function of phy gen may explain the lack of protective effect of c atherosclerotic calcification in males.[26]

Cornelis et al (2006) shed some light on why these studies commonly reported a dose-dependent J- or U-shaped curve.[27] According to their study, the increased risk of coronary heart disease among boiled (unfiltered) coffee con-



The genetic associations identified by Cornelis et al[27] were not observed in the large prospective analysis by Zhou and

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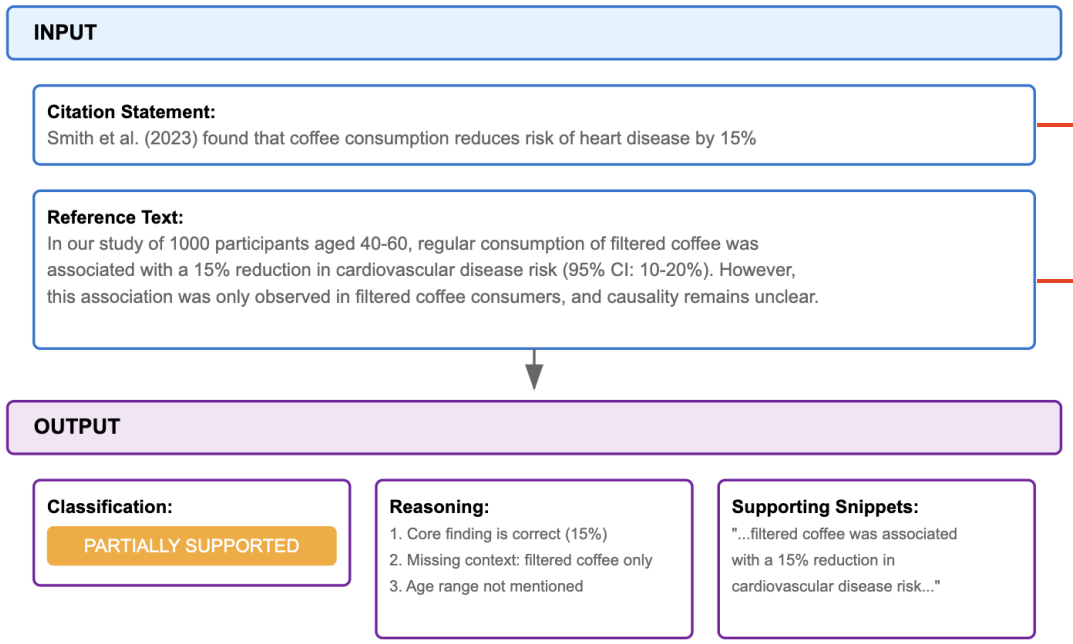
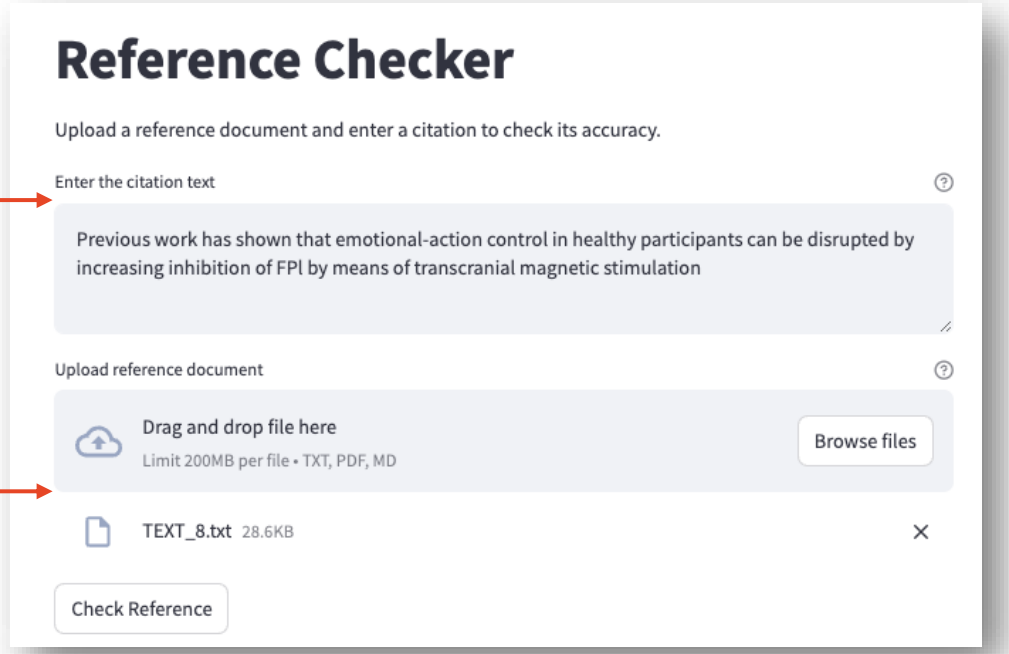
ion was found between moderate coffee consumption and cardiovascular disease events in patients who had had a myocardial infarction.[28] After a mean follow-up of 3.5 years, coffee consumption did not change the risk of developing coronary heart disease, stroke, or sudden cardiac death in those

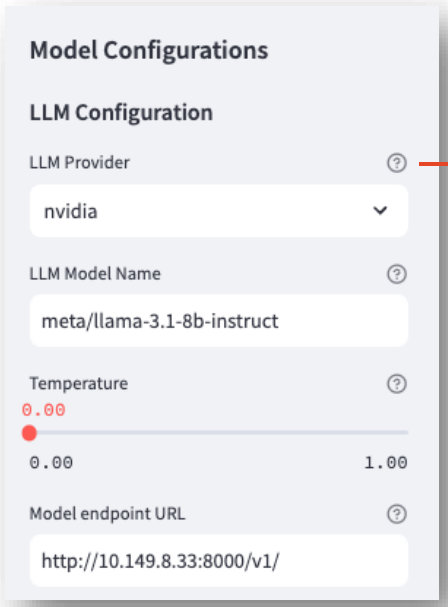
AI Reference Checker automates citation validation against referenced documents.





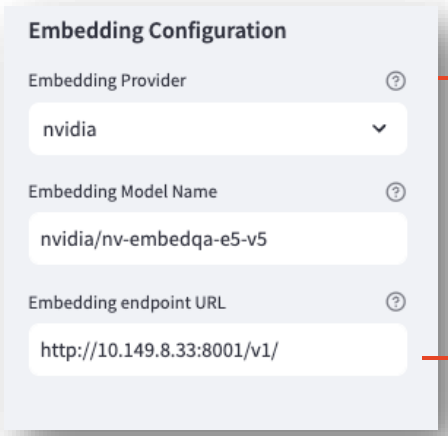
Processes citation statements to verify if the referenced text accurately supports each claim.

Leveraging NVIDIA microservices to implement LLMs, document retrieval and ranking.



Key Feature 1.
LLM Provider Support:
Interact with either NVIDIA or OpenAI Language Models.

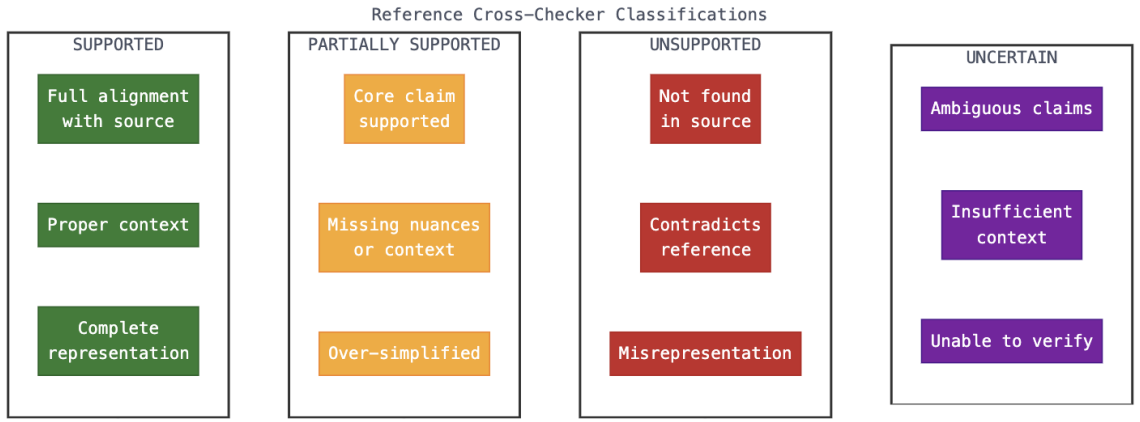
Key Feature 3.
Retrieval and Ranking:
Use Chroma Vector Store and FlashrankRerank to retrieve and rank document chunks.

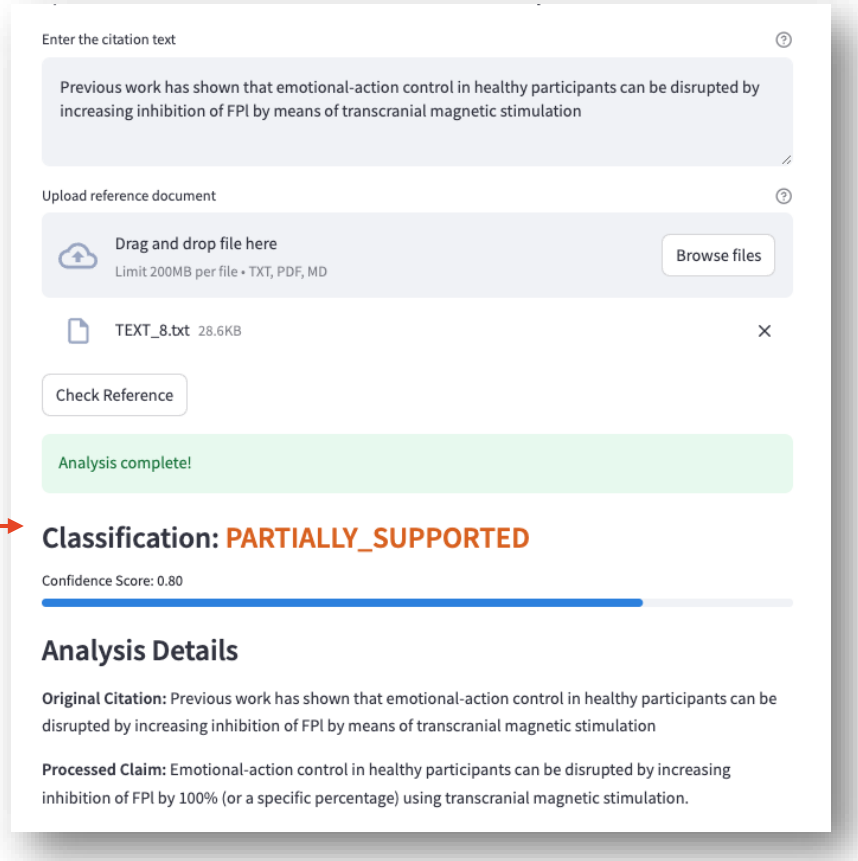


Key Feature 2.
Embeddings:
Use NVIDIA or OpenAI embeddings for vectorization.

Key Feature 4.
Local cluster:
Run endpoints in the local environment for confidential data integration.

The tool classifies citations into four categories, providing reasoning and supporting evidence.





Output 1.

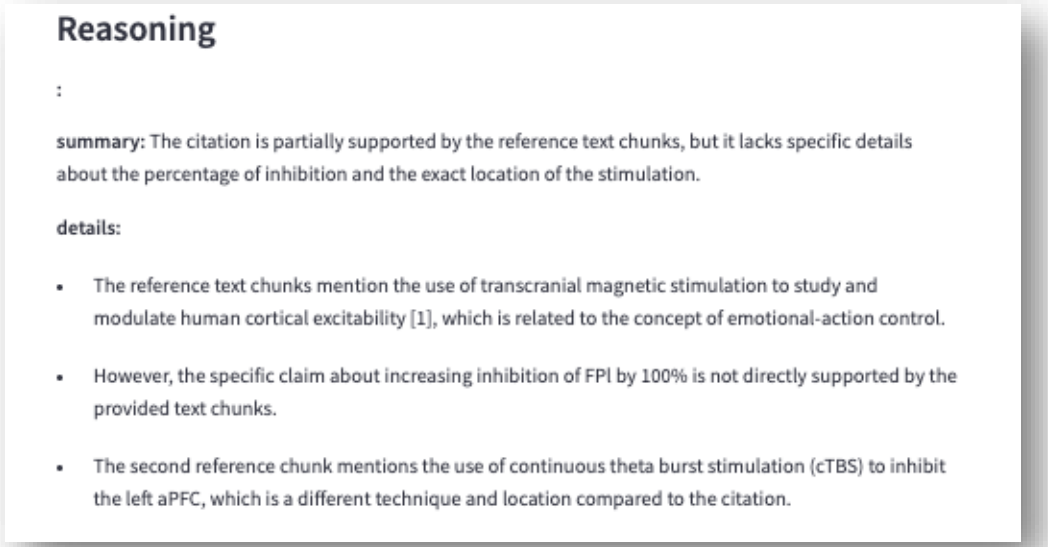
Classification with Confidence Score:
Supported, Partially Supported, Not Supported, and Uncertain

It streamlines citation reviews, saving time and enhancing research accuracy and quality.

Output 2.

Reasoning:

Provide explainable reasons for the model classification, such as whether it misses context or is over-simplified.



Reasoning

:

summary: The citation is partially supported by the reference text chunks, but it lacks specific details about the percentage of inhibition and the exact location of the stimulation.

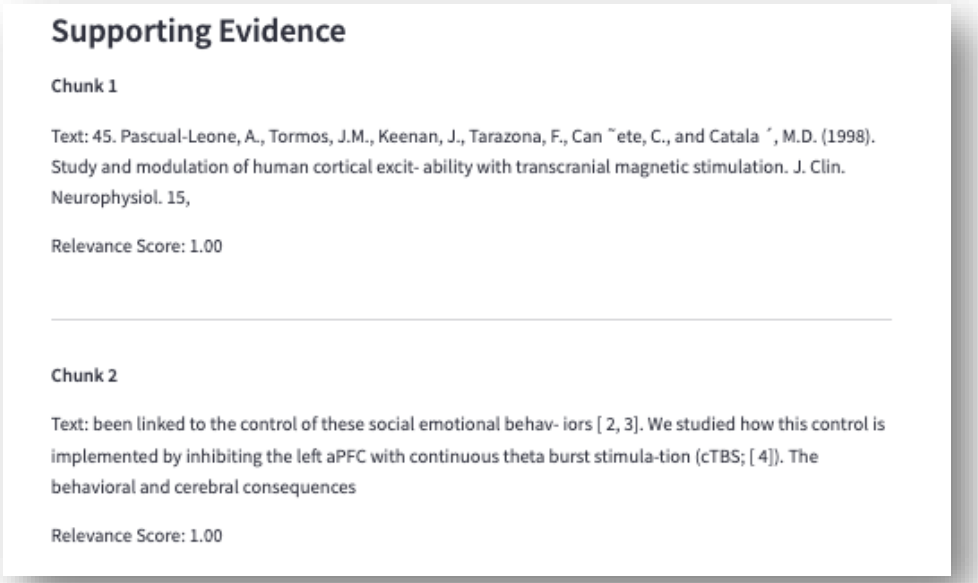
details:

- The reference text chunks mention the use of transcranial magnetic stimulation to study and modulate human cortical excitability [1], which is related to the concept of emotional-action control.
- However, the specific claim about increasing inhibition of FPl by 100% is not directly supported by the provided text chunks.
- The second reference chunk mentions the use of continuous theta burst stimulation (cTBS) to inhibit the left aPFC, which is a different technique and location compared to the citation.

Output 3.

Supporting Evidence:

Retrieve the top-2 ranked document chunks with relevant scores.



Supporting Evidence

Chunk 1

Text: 45. Pascual-Leone, A., Tormos, J.M., Keenan, J., Tarazona, F., Can ˜ete, C., and Catala ´, M.D. (1998). Study and modulation of human cortical excit- ability with transcranial magnetic stimulation. J. Clin. Neurophysiol. 15,

Relevance Score: 1.00

Chunk 2

Text: been linked to the control of these social emotional behav- iors [2, 3]. We studied how this control is implemented by inhibiting the left aPFC with continuous theta burst stimula-tion (cTBS; [4]). The behavioral and cerebral consequences

Relevance Score: 1.00

Acknowledgement

*This work was completed in part at the **Generative AI Codefest**, Australia, part of the Open Hackathons program. We would like to acknowledge **OpenACC-Standard.org** for their support.*

*We would like to thank the **Australian Government Department of Industry, Science and Resources through the National AI Centre**, and the **National Computational Infrastructure (NCI)** for hosting the Generative AI CodeFest Australia together with **NVIDIA** and **Sustainable Metal Cloud (SMC).***

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Early adopters and interested contributors, please email sebastian.haan@sydney.edu.au

For more info, including data and fine-tuned model download, see:

https://sydney-informatics-hub.github.io/RefCheckAI/

Sydney Informatics Hub

Core Research Facilities at the University of Sydney

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