معاونت تحقیقات و فناوری

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وخدمات بهداشتی درمانی کرمان

تشخیص، استانداردسازی و بازنویسی متون علمی مبتنی بر

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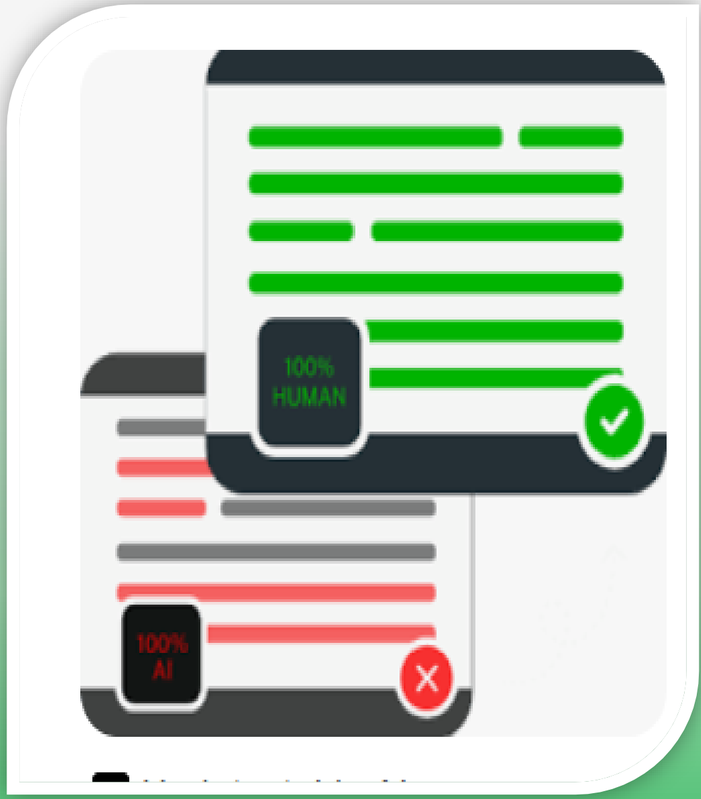

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Outline

ELSEVIER
Computer Methods and Programs in Biomedicine Update
Volume 5, 2024, 100145

Using artificial intelligence in academic writing and research: An essential productivity tool

Mohamed Khalifa [a b c], Mona Albadawy [d]

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significantly supports academic writing.

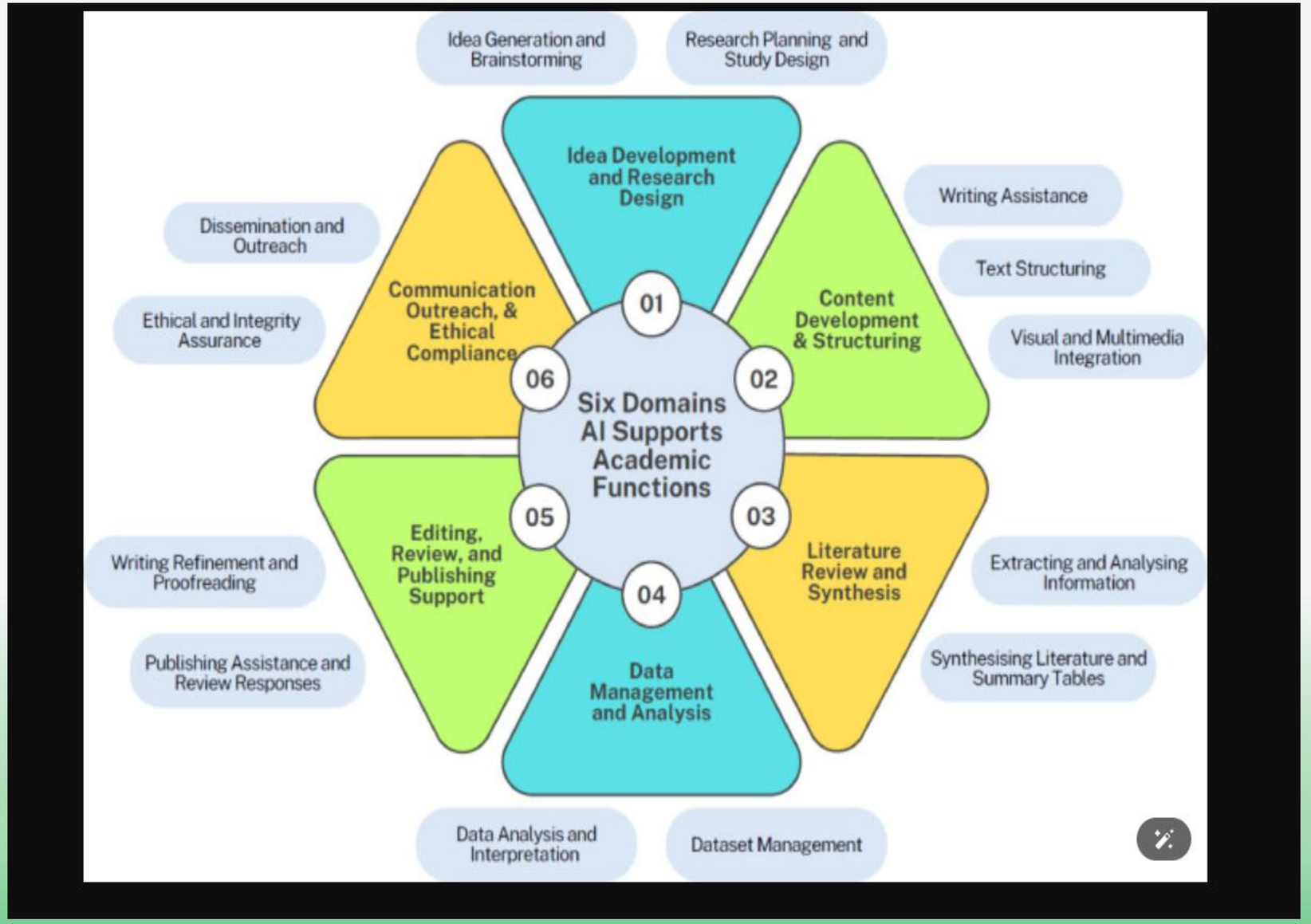
Methods

A systematic review of literature from databases like PubMed, Embase, and Google Scholar, published since 2019, was conducted. Studies were included based on relevance to AI's application in academic writing and research, focusing on writing assistance, grammar improvement, structure optimization, and other related aspects.

Results

The search identified 24 studies through which six core domains were identified where AI helps academic writing and research: 1) facilitating idea generation and research design, 2) improving content and structuring, 3) supporting literature review and synthesis, 4) enhancing data management and analysis, 5) supporting editing, review, and publishing, and 6) assisting in communication, outreach, and ethical compliance. ChatGPT has shown substantial potential in these areas, though challenges like maintaining academic integrity and balancing AI use with human insight remain.

The six domains where AI can improve academic functions.



Domain 5: editing, review, and publishing support

The fifth domain, Editing, Review, and Publishing Support, is integral to the research process, ensuring the clarity, coherence, and quality of academic output. This domain can be broadly categorised into Writing Refinement and Publishing Assistance, each playing a vital role in the journey from manuscript drafting to publication. Writing Refinement involves enhancing the textual quality of manuscripts, where AI tools are increasingly used for proofreading and editing.

AI-driven software like ChatGPT, Grammarly, and Paperpal can correct grammatical errors and improve writing style, especially beneficial for non-native English speakers . These tools help refine the language, making manuscripts clearer and more concise, which is crucial for conveying complex scientific ideas effectively. Additionally, AI can assist in drafting abstracts and summaries, ensuring that the key findings and implications of research are communicated succinctly and accurately.

https://pmc.ncbi.nlm.nih.gov/articles/PMC10712422/#B11

EDITORIAL ▸ Colomb Med (Cali). 2023 Sep 30;54(3):e1015868. doi: 10.25100/cm.v54i3.5868

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Chatbots, generative AI, and scholarly manuscripts: WAME recommendations on chatbots and generative artificial intelligence in relation to scholarly publications

Chris Zielinski [1,✉], Margaret A Winker [2], Rakesh Aggarwal [3], Lorraine E Ferris [4], Markus Heinemann [5], Jose Florencio Lapeña Jr [6], Sanjay A Pai [7], Edsel Ing [8], Leslie Citrome [9], Murad Alam [10], Michael Voight [11], Farrokh Habibzadeh [12]

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PMCID: PMC10712422 PMID: 38089825

Abstract

This statement revises our earlier "WAME Recommendations on ChatGPT and Chatbots in Relation to Scholarly Publications" (January 20, 2023). The revision reflects the proliferation

WAME recommendations on chatbots and generative artificial intelligence in relation to scholarly publication

WAME Recommendation 1

Chatbots cannot be authors. Journals have begun to publish articles in which chatbots such as Bard, Bing and ChatGPT have been used, with some journals listing chatbots as co-authors. The legal status of an author differs from country to country but under most jurisdictions, an author must be a legal person. Chatbots do not meet the International Committee of Medical Journal Editors (ICMJE) authorship criteria, particularly that of being able to give "final approval of the version to be published" and "to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved" [10]. No AI tool can "understand" a conflict-of-interest statement and does not have the legal standing to sign a statement. Chatbots have no affiliation independent of their developers. Since authors submitting a manuscript must ensure that all those named as authors meet the authorship criteria, chatbots cannot be included as authors.

WAME Recommendation 2

ON THIS PAGE

WAME Recommendation 2

Authors should be transparent when chatbots are used and provide information about how they were used. The extent and type of use of chatbots in journal publications should be indicated. This is consistent with the ICMJE recommendation of acknowledging writing assistance [11] and providing in the Methods detailed information about how the study was conducted and the results generated [12].

WAME Recommendations 2.1

Authors submitting a paper in which a chatbot/AI was used to draft new text should note such use in the acknowledgment; all prompts used to generate new text, or to convert text or text prompts into tables or illustrations, should be specified.

WAME Recommendation 2.2

When an AI tool such as a chatbot is used to carry out or generate analytical work, help report results (***e.g.*** , generating tables or figures), or write computer codes, this should be stated in the body of the paper, in both the Abstract and the Methods section. In the interests of enabling scientific scrutiny, including replication and identifying falsification, the full

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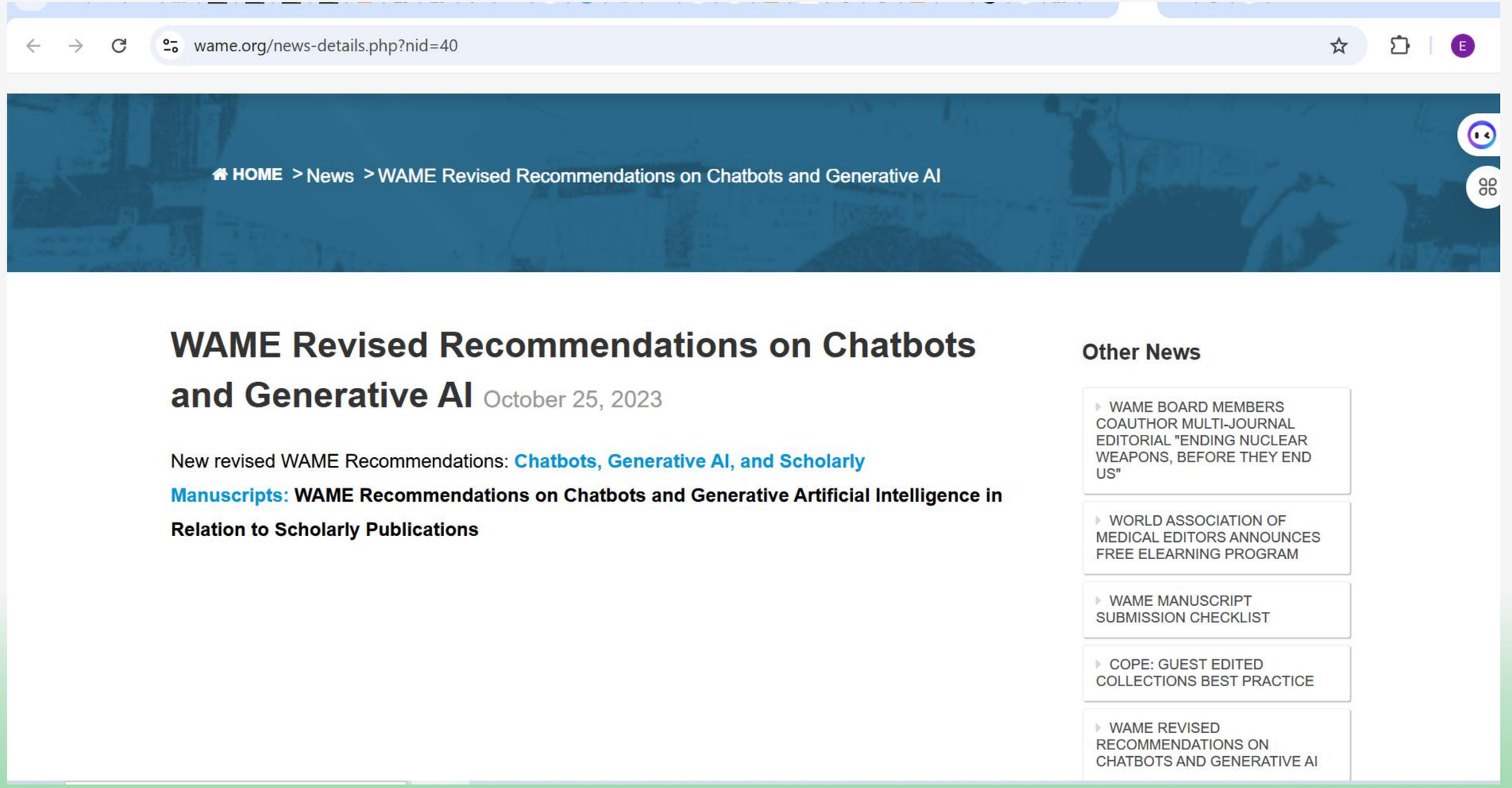
https://www.wame.org/news-details.php?nid=40



Defining the Role of Authors and Contributors

PAGE CONTENTS

1. Why Authorship Matters

Authorship confers credit and has important academic, social, and financial implications. Authorship also implies responsibility and accountability for published work. The following recommendations are intended to ensure that contributors who have made substantive intellectual contributions to a paper are given credit as authors, but also that contributors credited as authors understand their role in taking responsibility and being accountable for what is published.

https://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html#four

acknowledged individuals.

Use of AI for writing assistance should be reported in the acknowledgment section.

4. Artificial Intelligence (AI)-Assisted Technology

At submission, the journal should require authors to disclose whether they used artificial intelligence (AI)-assisted technologies (such as Large Language Models [LLMs], chatbots, or image creators) in the production of submitted work. Authors who use such technology should describe, in both the cover letter and the submitted work in the appropriate section if applicable, how they used it. For example, if AI was used for writing assistance, describe this in the acknowledgment section (see Section II.A.3). If AI was used for data collection, analysis, or figure generation, authors should describe this use in the methods (see Section IV.A.3.d). Chatbots (such as ChatGPT) should not be listed as authors because they cannot be responsible for the accuracy, integrity, and originality of the work, and these responsibilities are required for authorship (see Section II.A.1). Therefore, humans are responsible for any submitted material that included the use of AI-assisted technologies. Authors should carefully review and edit the result because AI can generate authoritative-sounding output that can be incorrect, incomplete, or biased. Authors should not list AI and AI-assisted technologies as an author or co-author, nor cite AI as an author. Authors should be able to assert that there is no plagiarism in their paper, including in text and images produced by the AI. Humans must ensure there is appropriate attribution of all quoted material, including full citations.

NEXT: Disclosure of Financial and Non-Financial Relationships and Activities, and Conflicts of Interest

عمده ترین تفاوت های متون تولید شده توسط AI در مقابل متون تولید شده توسط انسان

متون AIمعمولاً نسبت به نوشتار انسانی:

- ❖ دارای ساختارهای بیش‌ازحد منظم
- ❖ الگوهای تکراری و کلیشه‌ای
  - ارجاعات اشتباه یا ساختگی
  - استفاده بیش از حد از ساختارهای استاندارد و قالبی
  - کمتر دارای عمق تحلیلی و جزئیات معنایی عمیق هستند

نکات مهم در انسانیزه کردن متون علمی

۱. **حفظ نقش انسان در چرخه نوشتن اصل:** انسان باید در مراحل کلیدی نوشتار علمی (ایده‌پردازی، تحلیل، جمع‌بندی و نتیجه‌گیری) حضور داشته باشد تا متن نه فقط از لحاظ لغوی به‌نظر انسان‌آسان باشد، بلکه از لحاظ **عمق تحلیلی و اعتبار علمی** نیز معتبر باشد.

۲- استفاده از AIبرای کمک در ساختاردهی، نه جایگزینی تحلیل انسانی

۳- افزایش تنوع واژگان و سبک‌های زبانی انسانی

۴- **تمرکز بر اصالت علمی و صحت محتوا**

اصل: انسانی‌سازی متن به‌معنای حفظ **تعهد به صحت علمی، استناد دقیق، و بازتاب دقیق نتایج پژوهش** است. AIبه‌تنهایی ممکن است اطلاعات را **به‌صورت عمومی یا سطحی** ارائه دهد، که برای متون علمی کافی نیست.

۵- خوانایی:

متن علمی باید هم از نظر ساختار علمی و هم از منظر **خوانایی انسانی** تنظیم شود . یعنی استفاده از **جملات طبیعی، تنوع طول جمله، وضوح ارتباط بین بخش‌ها و اصطلاحات متناسب با زمینه رشته**. AI ممکن است جملات طولانی و بیش‌منظم‌تر تولید کند و این با خوانایی انسانی مطابقت کامل ندارد.

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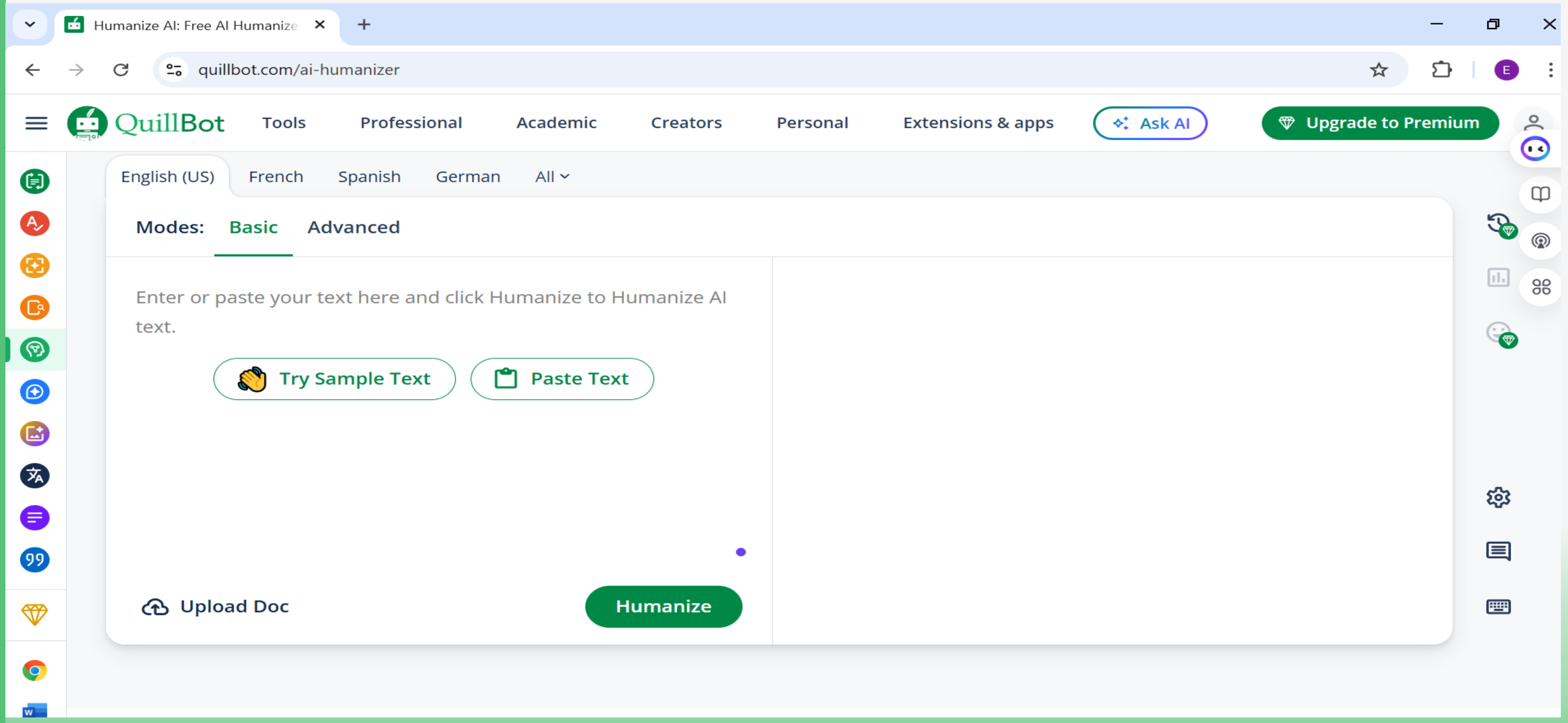

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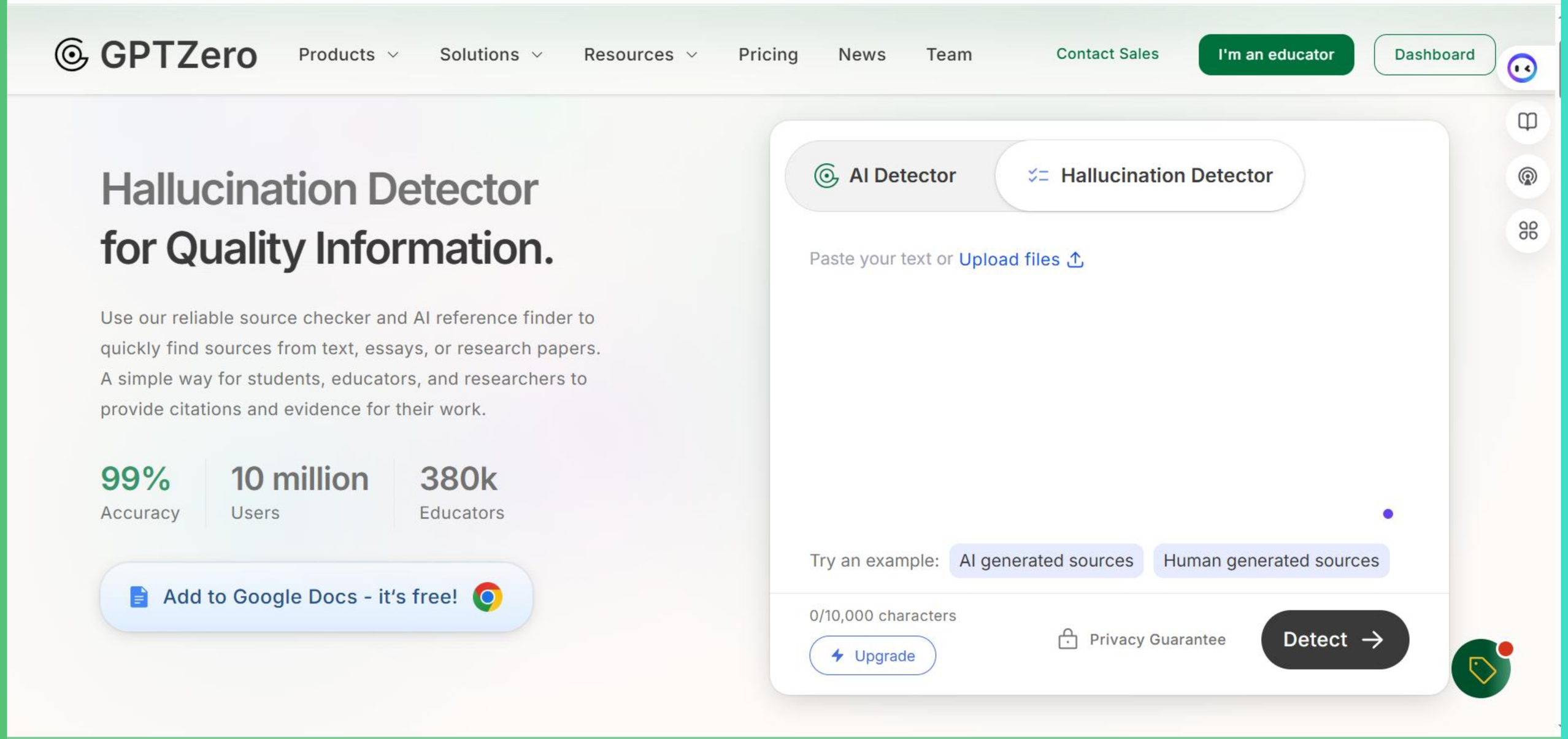

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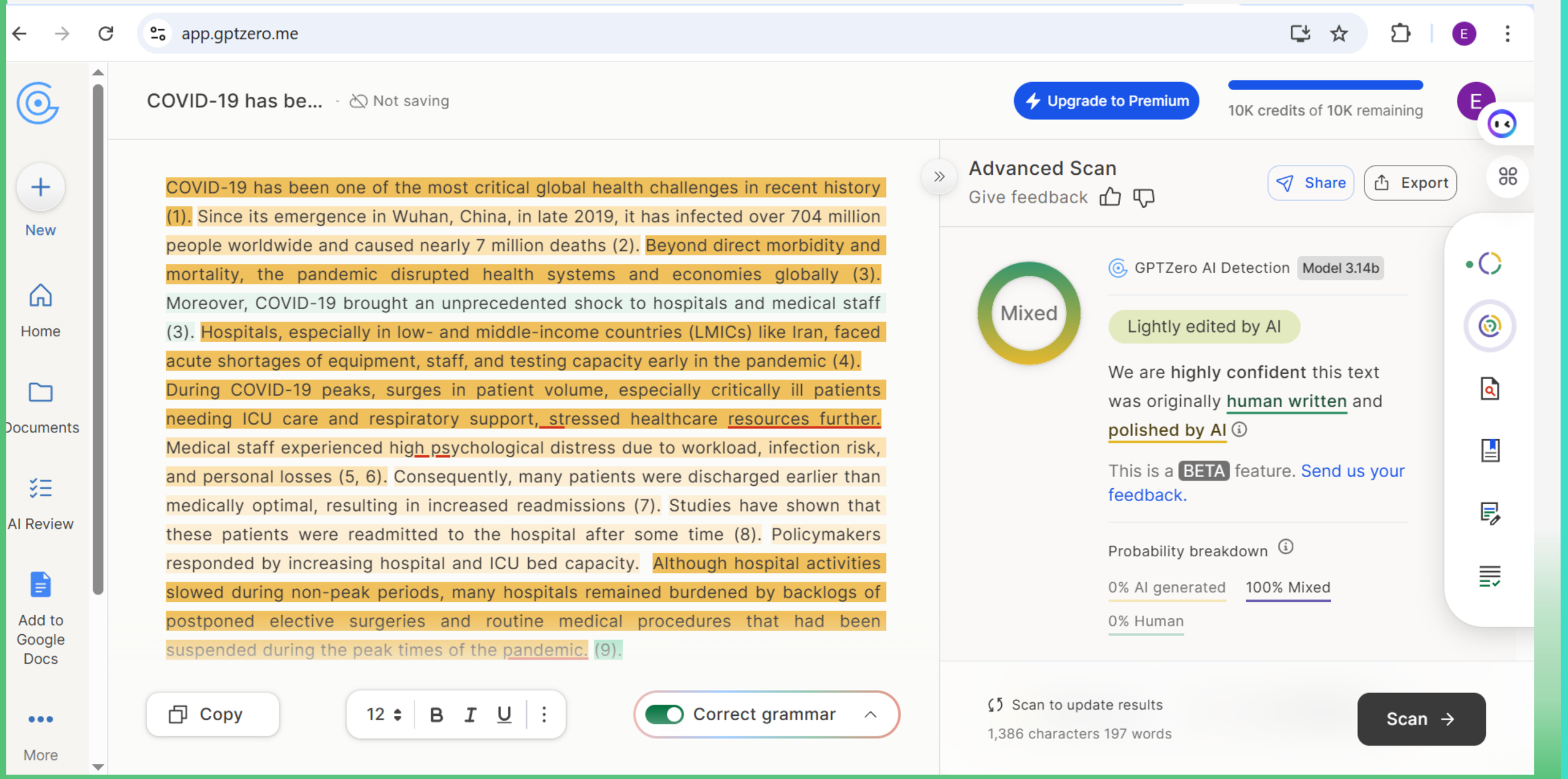

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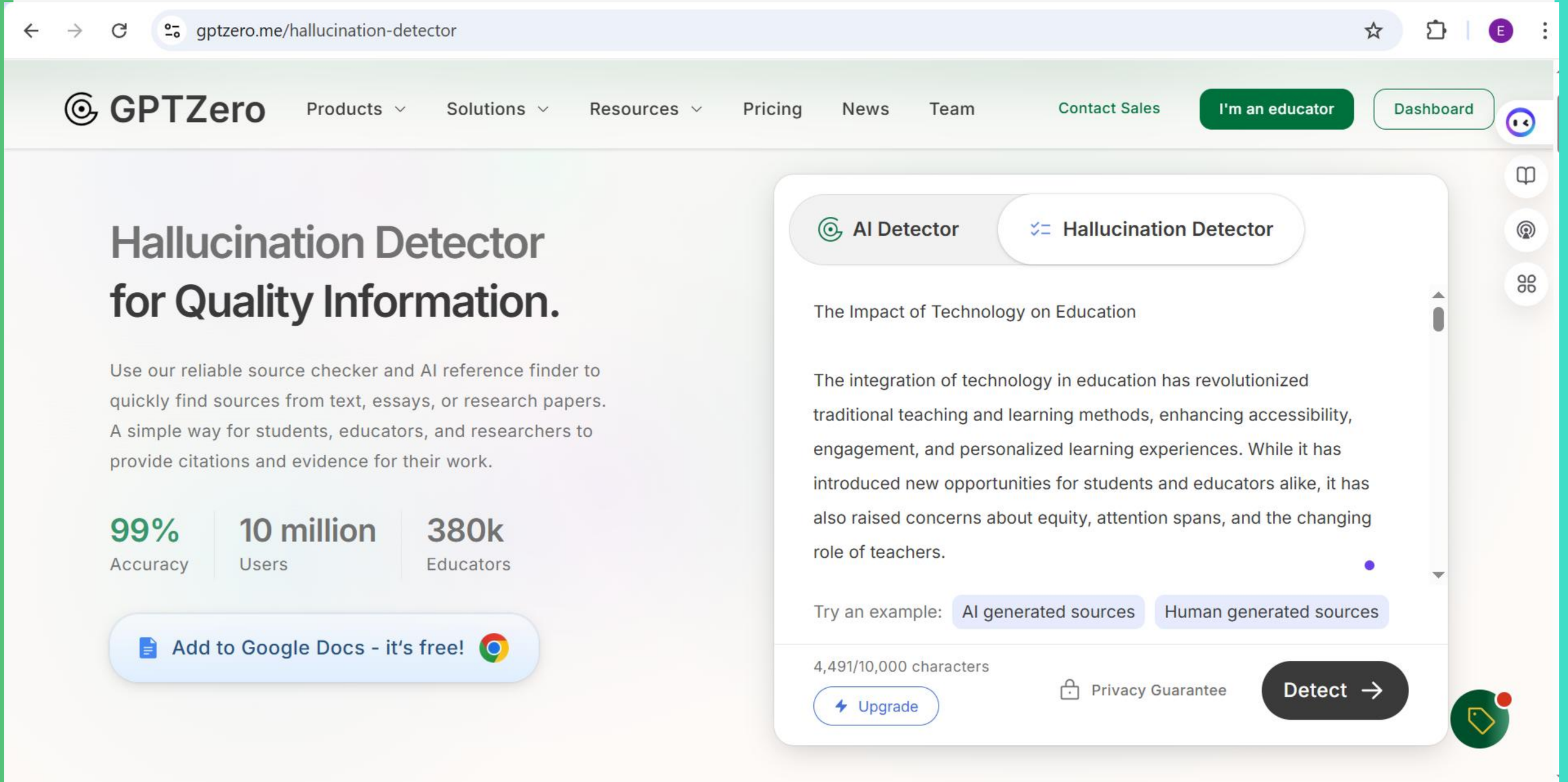

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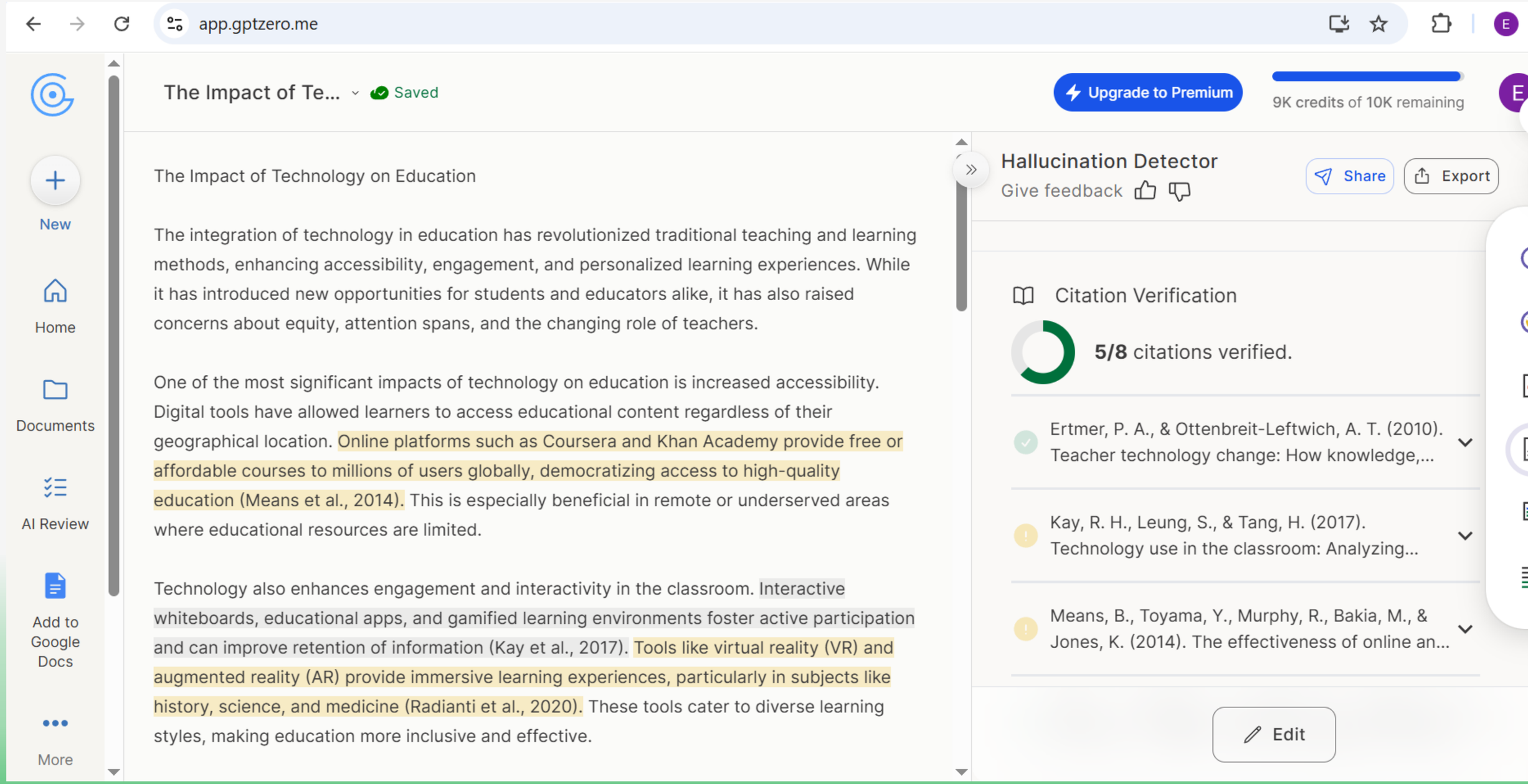

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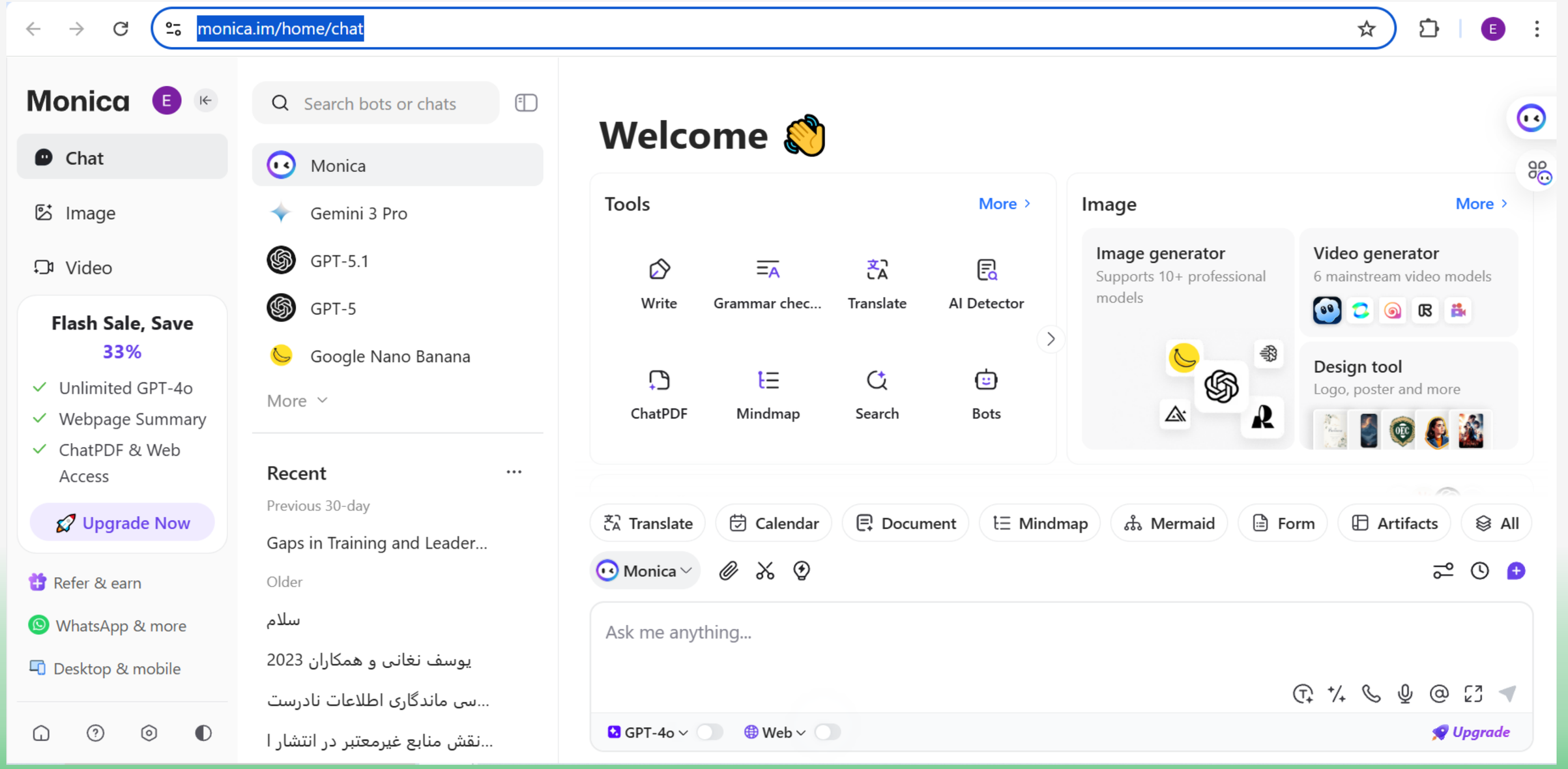

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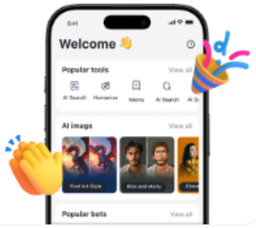

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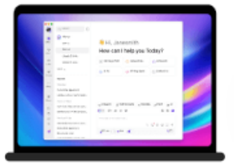

Tools

Write	Grammar checker	Translate	AI Detector	ChatPDF	Mindmap
Search	Bots	Read	Memo	AI Humanizer	Toolbox
Writing Agent	Sheet filler	Podcast	Form		

What's new in Monica

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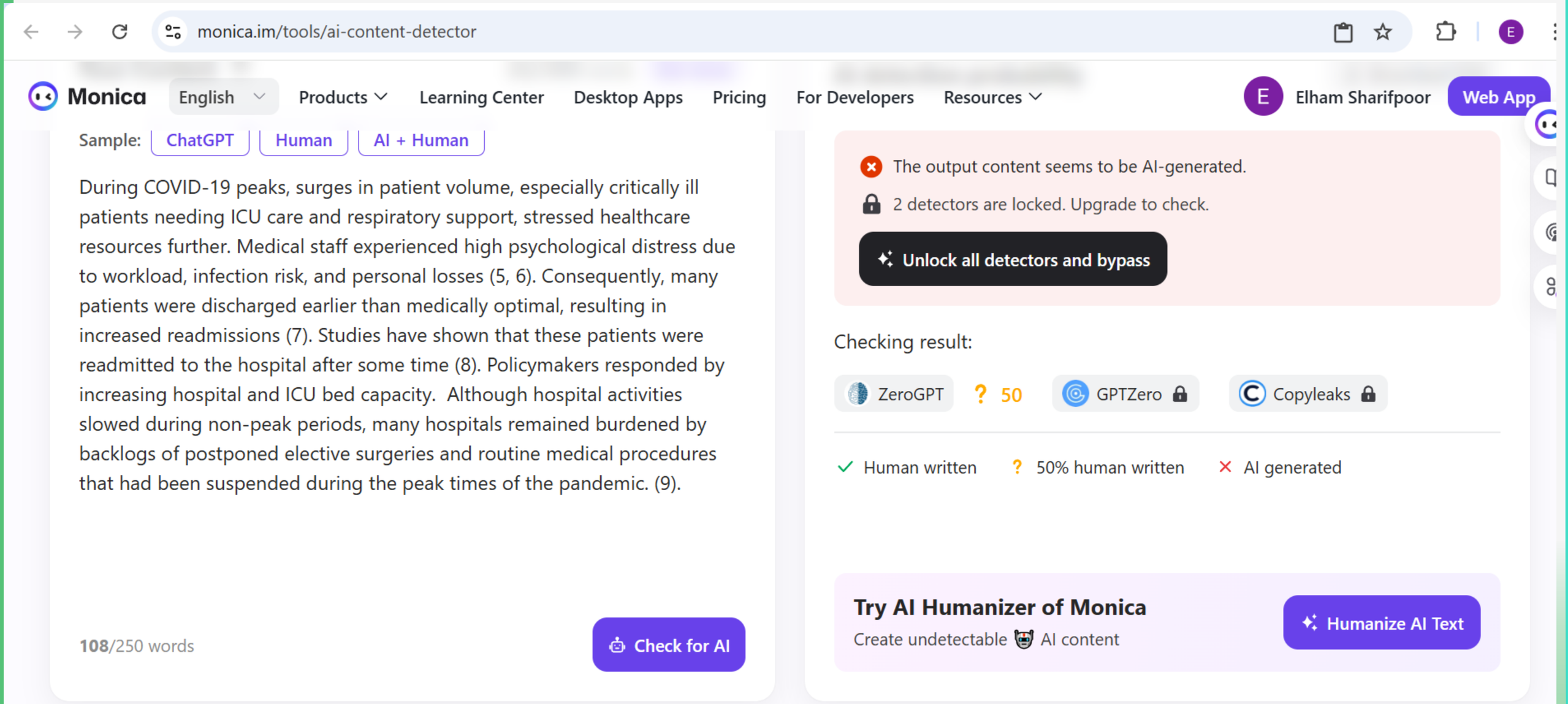

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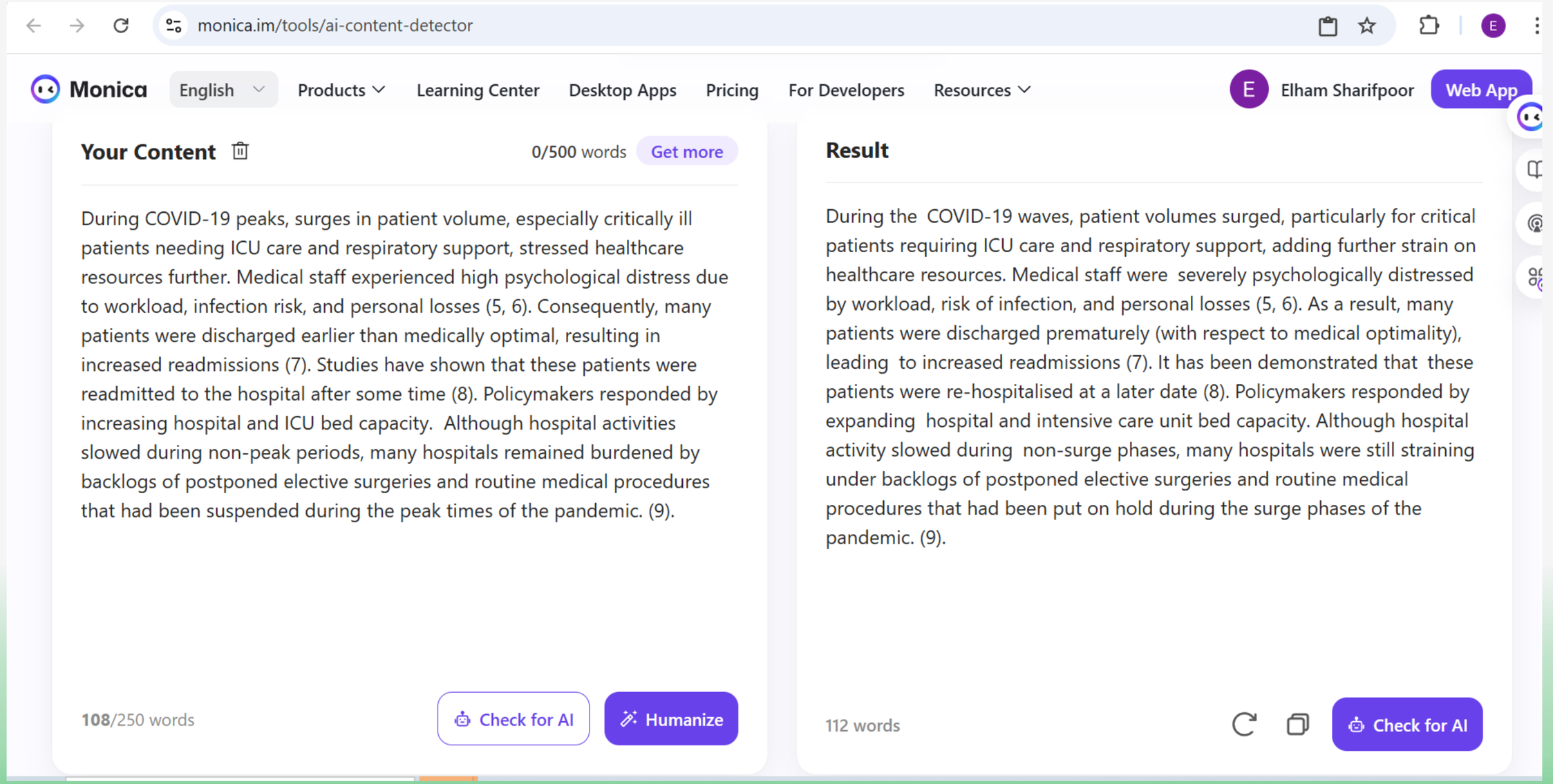

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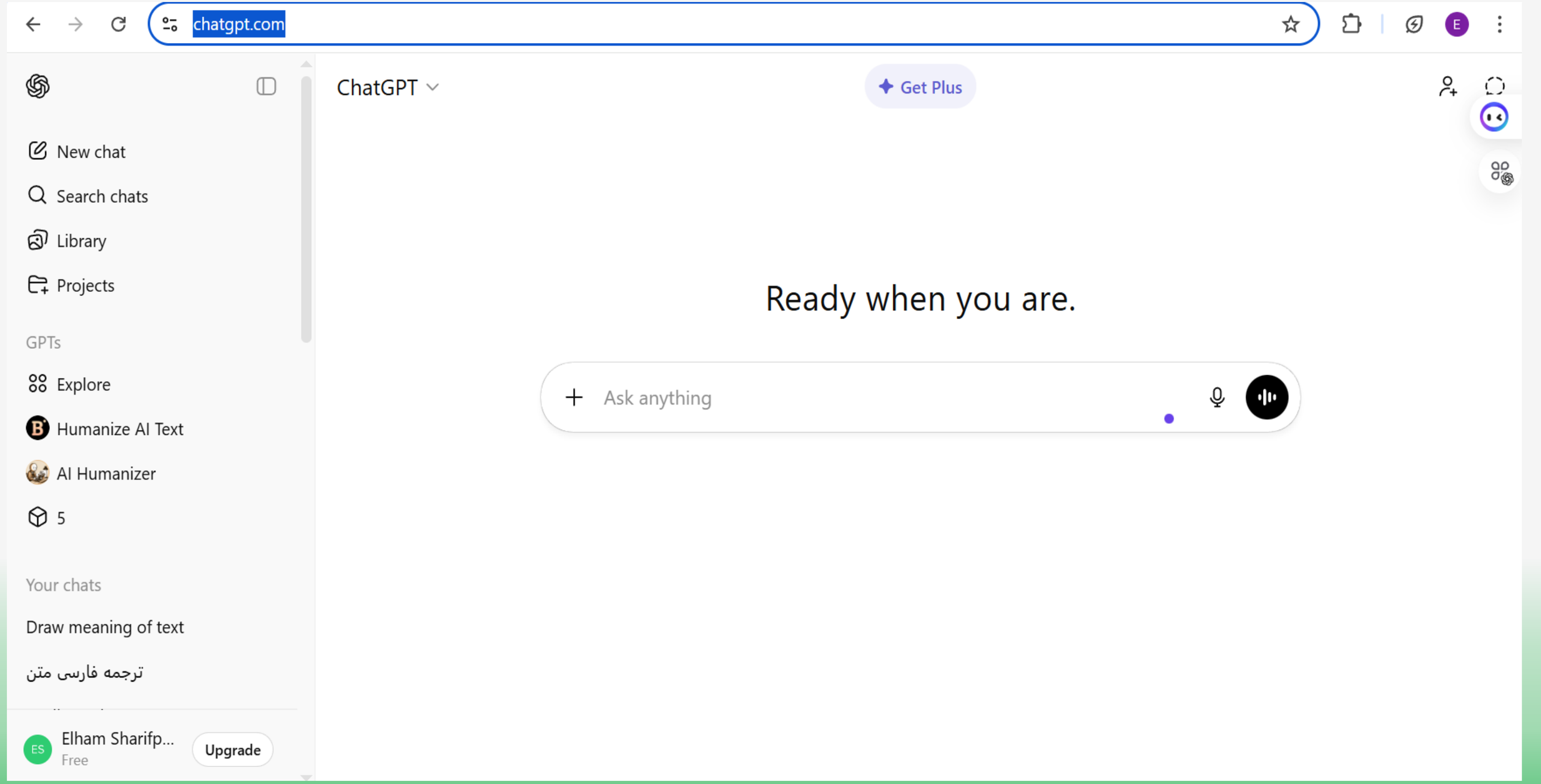

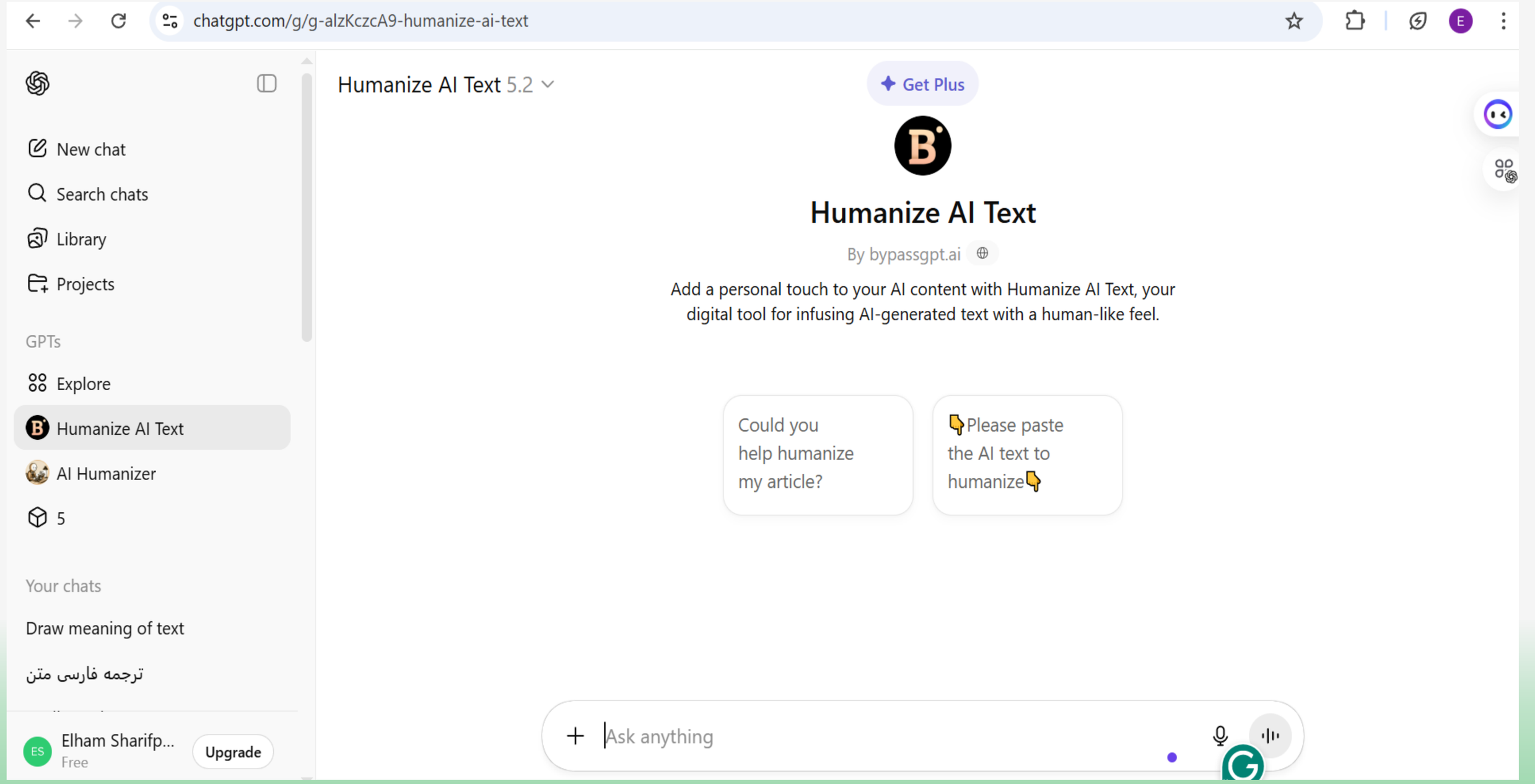
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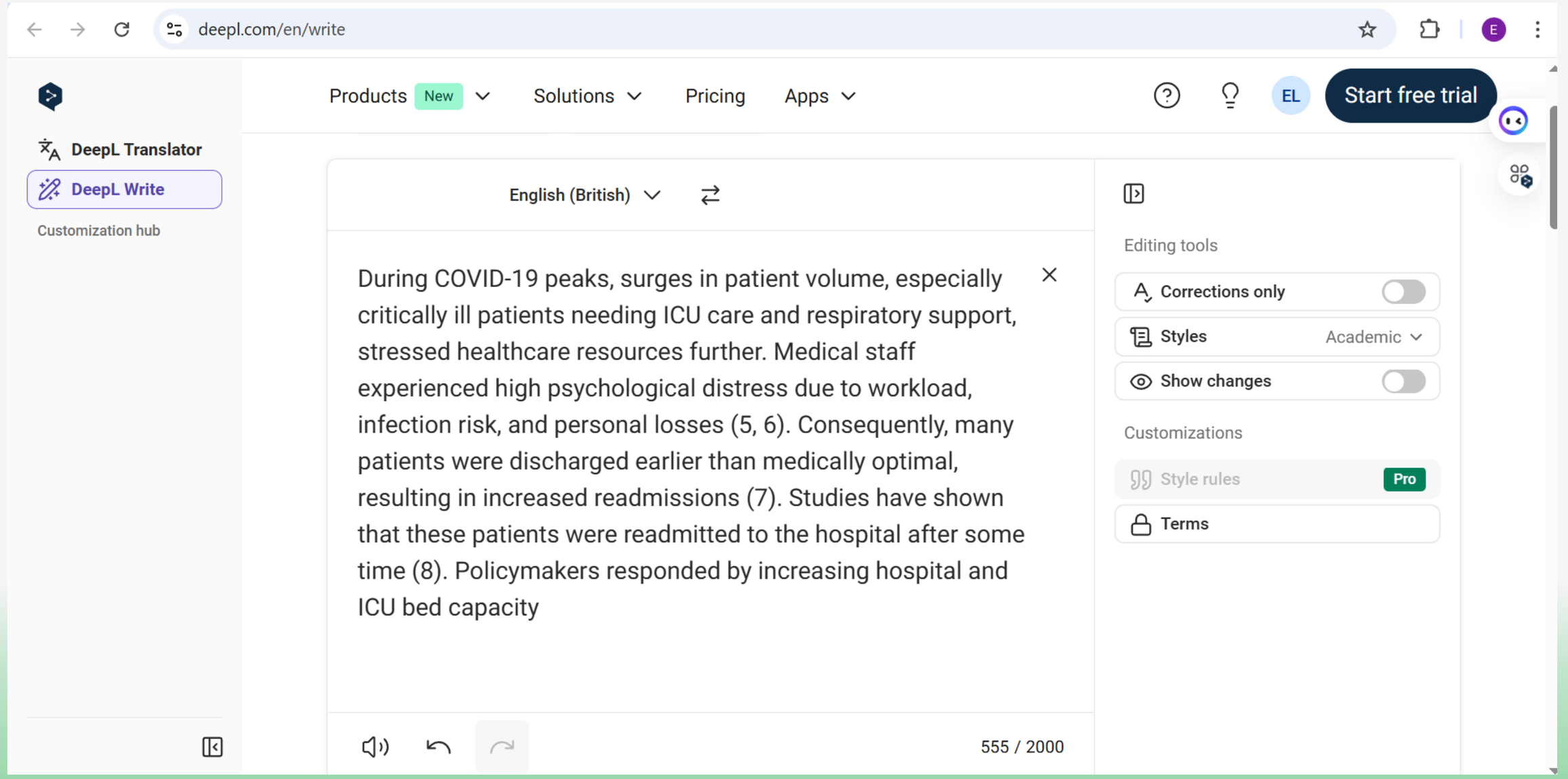

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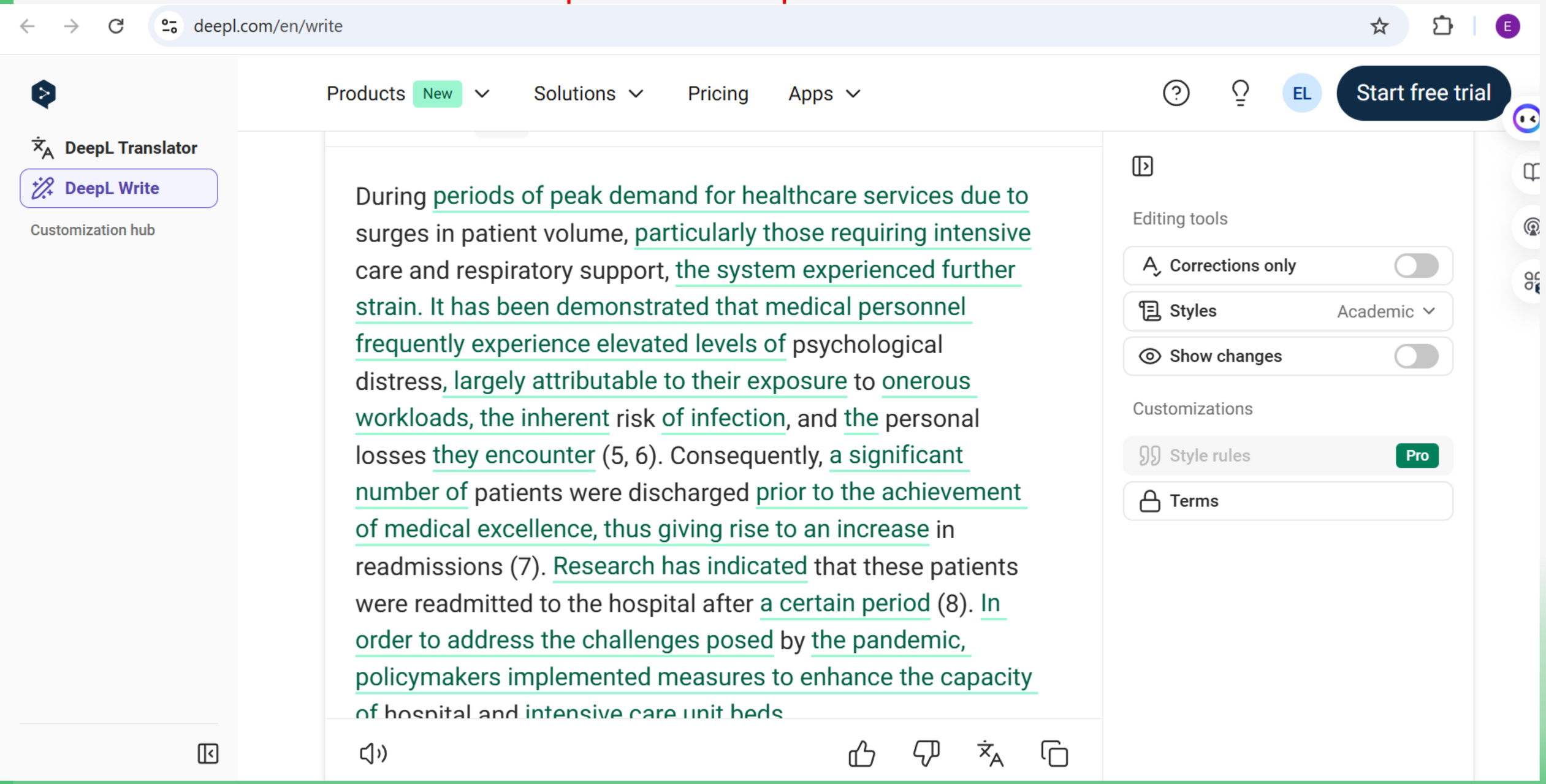


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