

# AI use in American newspapers is widespread, uneven, and rarely disclosed

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## Abstract

AI is rapidly transforming journalism, but the extent of its use in published newspaper articles remains unclear. We address this gap by auditing a large-scale dataset of 186K articles from online editions of 1.5K American newspapers published in the summer of 2025. Using Pangram, a state-of-the-art AI detector, we discover that approximately 9% of newly-published articles are either partially or fully AI-generated. This AI use is unevenly distributed, appearing more frequently in smaller, local outlets, in specific topics such as weather and technology, and within certain ownership groups. We also analyze 45K opinion pieces from *Washington Post*, *New York Times*, and *Wall Street Journal*, finding that they are 6.4 times more likely to contain AI-generated content than news articles from the same publications, with many AI-flagged op-eds authored by prominent public figures. Despite this prevalence, we find that AI use is rarely disclosed: a manual audit of 100 AI-flagged articles found only five disclosures of AI use. Overall, our audit highlights the immediate need for greater transparency and updated editorial standards regarding the use of AI in journalism to maintain public trust.

## 1 Introduction

How much AI-generated content is being published in newspapers across America? To answer this question, we conduct a large-scale audit of recently-published articles using Pangram (Emi and Spero, 2024), a high-precision AI detector that has previously been used to audit consumer reviews (Cavazos and Sterling, 2024), research papers (Evanko and Natale, 2025), and Medium articles (Knibbs, 2024). Our analysis reveals that ~9% of newly-published U.S. newspaper articles are either partially or fully AI-generated.

**Why does this matter?** Our audit is largely motivated by concerns of *transparency* and *factuality*. We do not claim that all AI use is inherently

harmful; in fact, limited applications like grammar / style checking and template-driven article creation (e.g., weather reports) can improve article quality and accessibility (Medill Local News Initiative, 2024; Radcliffe, 2025). However, large language models often hallucinate (Maynez et al., 2020; Ji et al., 2023; Su et al., 2024), and they also inherit social biases from their training data (Gallegos et al., 2024; Hu et al., 2025); thus, public opinion is highly sensitive to *undisclosed* AI use.<sup>1</sup> We manually analyze 100 articles flagged for AI use by Pangram and find that only 5 of them disclose AI use, while only 7 of the newspapers have any public policies on AI use, leaving readers largely unable to determine the role AI plays in article authorship.

**Audit design:** We collect and audit three large-scale datasets of American newspapers:

- recent\_news contains 186K articles published online by 1.5K local and national newspapers from June to September 2025.
- opinions contains 45K *opinion* articles published by the New York Times, Washington Post, and Wall Street Journal between August 2022 and September 2025.
- ai\_reporters is a historical dataset of 20K articles published by a subset of 10 veteran reporters who “authored” multiple AI articles in recent\_news. Each reporter in this dataset published articles written both before and after the release of ChatGPT (November 2022), enabling longitudinal analysis.

<sup>1</sup>Recent studies from Pew Research show that (1) 49% of Americans who get news directly from ChatGPT and other AI assistants report encountering inaccurate information (Lipka and Eddy, 2025); (2) 56% of Americans would feel less confident about a news article if they knew an AI wrote it (Yam and Kennedy, 2025); and (3) 76% believe it is extremely important for them to know if the text they are reading is AI-generated (Kennedy et al., 2025).

## IN THIS PAPER...

**AI USE:** We use the term *AI use* throughout this paper to denote articles detected by Pangram as either **MIXED** or **AI-GENERATED**.

**EXAMPLES:** Each article discussed in this paper is associated with a icon that links to an AI prediction dashboard and a icon that links to the original news article.

We feed each article in all three datasets through Pangram’s API to obtain both an AI likelihood (from 0-100%) and a categorical label in {**HUMAN-WRITTEN**, **MIXED**, **AI-GENERATED**}. Pangram has a reported false positive rate (FPR) of  $\sim 0.001\%$  on news text (Emi, 2025), and independent research studies confirm its reliability across different domains (Russell et al., 2025; Jabarian and Imas, 2025; Dugan et al., 2025). Importantly, for articles labeled **MIXED**, we cannot infer the role that AI played in the authorship process: we only know that some parts of a **MIXED** article are classified as human-written while other parts are classified as AI-generated. Finally, we perform topic classification on each article and link each newspaper to circulation and ownership metadata when available.

**AI use in published articles is increasingly common yet rarely disclosed.** In our `recent_news` dataset, 9.1% of articles are labeled by Pangram as either **AI-GENERATED** or **MIXED**, and disclosure of AI use is rare in our manual sample. Digging deeper, we observe that AI usage is unevenly distributed: it is much higher in smaller local outlets than nationally-circulated papers, and particularly concentrated in the mid-Atlantic and Southern U.S. states (Figure 1); it occurs more frequently in topics such as weather, science / technology, and health (Figure 2); it varies across ownership group, with Boone Newsmedia and Advance Publications among the heaviest AI adopters (Figure 3); and it is higher in languages other than English (Figure 4).<sup>2</sup>

**AI use is concentrated in opinion articles at top newspapers.** Opinion articles published at the

<sup>2</sup>Example articles linked within this paper are solely for illustrative purposes. Their inclusion does not attribute any intent or misconduct on part of any reporters: Pangram has a small but non-zero FPR, and we also emphasize that it is infeasible to tease apart exactly how AI is used in **MIXED** authorship cases.

	recent_news	opinions	ai_reporters
<b>Temporal coverage</b>			
Years	2025	2022–2025	2011–2025
<b>Dataset statistics</b>			
# Articles	186,507	44,803	20,131
# Authors	34,608	9,863	10
# Newspapers	1,528	3	14
Avg. tokens	787.4	1078.4	874.53
<b>AI use statistics</b>			
<b>HUMAN-WRITTEN</b>	90.85%	99.04%	87.77%
<b>MIXED</b>	3.98%	0.85%	5.49%
<b>AI-GENERATED</b>	5.24%	0.11%	6.74%

Table 1: Dataset and AI use statistics for `recent_news`, `opinions`, and `ai_reporters`. The token counts are reported as per `tiktoken` tokenizer (`o200k_base`).

NYT, WaPo, and WSJ are **6.4** times more likely to contain AI use than contemporaneous news articles from the same three newspapers (4.5% vs. 0.7%). Many opinion articles flagged for AI use are written by prominent guest contributors, including Nobel prize winners, US Senators and Governors, Pulitzer Prize-winning journalists, and CEOs (see Table 4 for examples). Analysis of both `opinions` and `ai_reporters` show AI usage rising over time, with reporters in the latter dataset increasing their AI use from  $\sim 0\%$  prior to 2023 to over 40% in 2025 on average (Figure 8).

**Contributions:** We release our three datasets,<sup>3</sup> analysis code, and an interactive dashboard to facilitate further exploration of AI use in newspapers.<sup>4</sup> We also commit to periodically updating our dashboard with new articles and annotations (i.e., disclosure audits) to measure future changes to AI adoption by reporters.

## 2 Collecting newspaper articles

We collect three datasets of published newspaper articles (Table 1): `recent_news`, `opinions`, and `ai_reporters`. The datasets vary significantly in terms of coverage, diversity, and publication date, which allows us to analyze differences in AI use across local vs. national papers, staff reporters vs. guest contributors, and articles written pre- vs. post-ChatGPT. This section outlines our dataset creation process, in which the full text and metadata for each article is paired with a label indicating whether the article was generated via AI.

<sup>3</sup>We release links to the articles involved in our study (not full texts).

<sup>4</sup>[ainewaudit.github.io](https://ainewaudit.github.io)

## 2.1 recent\_news

To examine AI use in present-day newspaper journalism, we form the `recent_news` dataset by collecting 186,507 articles<sup>5</sup> published online by 1,528 unique newspapers between June 15th, 2025 and September 15th, 2025. To facilitate automatic data collection, we first obtain a list of 6,175 URLs for American newspapers<sup>6</sup> and filter out those that are unreachable and/or do not have active RSS feeds, which yielded 1,528 URLs. Roughly twice a week, from June 15 to September 15, we automatically accessed each RSS feed and downloaded the full text and metadata for up to 50 recently-published articles from each paper.<sup>7</sup> Each full text article was then preprocessed using the `Trafilatura` (Barbaresi, 2021) and `Newspaper4K`<sup>8</sup> libraries to strip headers/footers, advertisements, and HTML artifacts from the text.

## 2.2 opinions

While `recent_news` contains a broad sample across many different American newspapers, topics, and journalists, another object of our study is AI use in *opinion* articles written by prominent people in highly-reputable newspapers. To facilitate this, we also collect a dataset of opinions articles published by The New York Times, Wall Street Journal, and Washington Post between August 2022 and September 2025. The full text and metadata of these articles were accessed via *ProQuest Recent Newspapers*. In total, we collected 44,803 articles during this time period: 16,964 from WSJ, 15,977 from WP, and 11,862 from NYT.

## 2.3 ai\_reporters

Several reporters in `recent_news` published articles both before and after the release of ChatGPT, making them good candidates for a longitudinal analysis to explore when and how they started using AI. We identify a set of 10 veteran reporters from `recent_news` who meet two criteria: (1) they have published articles prior to November 2022,<sup>9</sup>

<sup>5</sup>Each instance in our datasets includes the full article text along with title, author, publication date, newspaper, and URL.

<sup>6</sup><https://onlinenewspapers.com/usstate/usatable.shtml>

<sup>7</sup>While the majority of `recent_news` is obtained from RSS feeds, articles from some newspapers (e.g., Washington Post, Wall Street Journal) were accessed via *ProQuest Recent Newspapers*.

<sup>8</sup><https://github.com/AndyTheFactory/newspaper4k>

<sup>9</sup>This cutoff was selected because the public release of ChatGPT in November 2022 (OpenAI, 2022) made AI-assisted writing tools widely accessible.

and (2) at least three of their articles were identified as **MIXED** or **AI-GENERATED**. We then write ten custom scrapers, one for each reporter, to collect a corpus of *all* of their published articles that are available online, resulting in a final dataset of 20,132 articles from 14 newspapers.<sup>10</sup>

## 2.4 Labeling the datasets

For each of the 251,442 total articles across all three datasets, we use Pangram to obtain an AI detection label and score. We also classify each article into one of 19 topics, and we use an existing database to match about half of the newspapers in our `recent_news` with print circulation statistics.

**Detecting AI use:** Emi and Spero (2024) introduce Pangram; a robust AI-generated text detection tool. On news articles, it achieves a false positive rate of 0.001% (Emi, 2025), consistent with other studies that have also reported low FPR (Russell et al., 2025; Jabarian and Imas, 2025; Dugan et al., 2025). Using Pangram’s inference API<sup>11</sup>, we collect (1) the likelihood (from 0-100%) that a text is AI-generated and (2) a text label that is one of **HUMAN-WRITTEN**, **MIXED**, or **AI-GENERATED**.<sup>12</sup> Pangram predicts **MIXED** when there is a high confidence of both AI and human writing present in the document; specifically, where some segments are predicted as AI, and some segments are predicted as human. This notion aligns with recent research that models mixed authorship and AI editing as a continuum rather than a binary distinction (Thai et al., 2025; Zeng et al., 2024). While prior studies have validated Pangram’s high accuracy, we also experiment with another commercial detector, GPTZero (Tian and Cui, 2023), and observe a high cross-detector agreement of 88.2% (Cohen’s  $\kappa = 0.764$ ).<sup>13</sup>

**Topic classification:** To analyze AI use across article topics, we further augment our datasets

<sup>10</sup>One journalist published in multiple newspapers.

<sup>11</sup>API documentation available [here](#).

<sup>12</sup>We simplify the fine-grained labels produced by the Pangram API in the following way: **HUMAN-WRITTEN** = {Human, Unlikely AI}; **MIXED** = {Mixed, Possibly AI, Likely AI}; **AI-GENERATED** = {Highly Likely AI, AI}. See §B for details on how labels are combined.

<sup>13</sup>This experiment was conducted on a balanced binary held-out set of 1K news articles, 500 of which are marked by Pangram as **HUMAN-WRITTEN** and 500 as **AI-GENERATED**. Agreement on the human subset is 98.4% while agreement on the AI subset is 78.4%, and discrepancies on the latter label are likely due to each detector’s differing treatment of **MIXED** text (see §B for more).

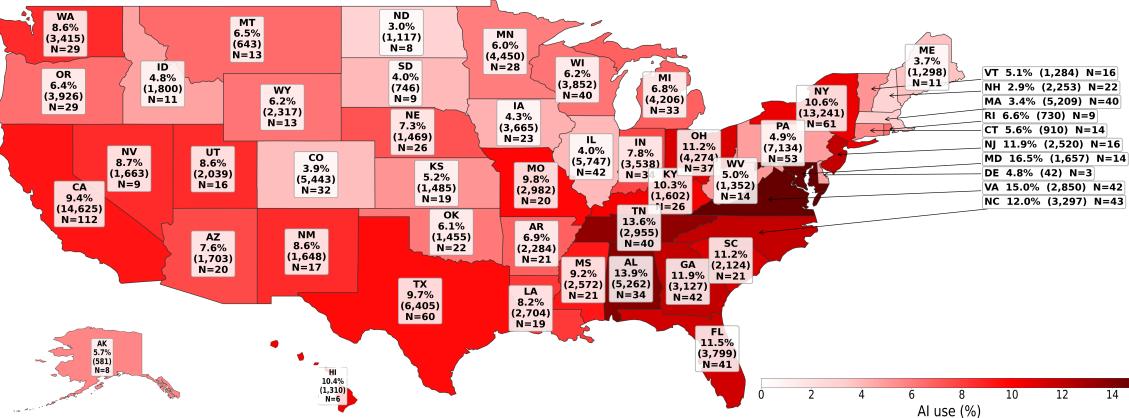


Figure 1: Map of the United States showing the AI use (%), number of articles, and number of unique newspapers for each state. States in the mid-Atlantic and southern US exhibit markedly higher AI use than other states. Note that this plot only considers articles written in English (see [Figure 17](#) for others).

with topic labels for each article using the International Press Telecommunications Council *Media Topics* taxonomy, which comprises 17 top-level topics (IPTC, 2025). We prompt QWEN3-8B (Qwen Team, 2025) in a zero-shot setting to assign a topic (full prompt and details in §A).<sup>14</sup> To assess the reliability of these topic labels, two of the authors independently reclassified a random subset of 500 model outputs,<sup>15</sup> with model–human agreement averaging 77%, indicating moderately strong alignment between the classifier and human judgments.

**Linking newspapers to circulation and ownership information:** To connect AI use to newspaper size and ownership, we gather print circulation and ownership information from the US News Deserts Database Archive ([UNC Center for Innovation & Sustainability in Local Media, 2020](#)). The archive's circulation series is assembled from AAM audits and self-reports, and it is historical data most comprehensively covering the state of newspapers in 2019. Accordingly, we treat circulation as a historical proxy for *print scale*, not a measure of current total audience.<sup>16</sup> 54.6% of the articles and 49.7% of newspapers in `recent_news` were matched to publications in the News Desert Database. 40.3% of articles come from small publications with daily circulation between 1-7K and another 36.3% comes from publications with a cir-

<sup>14</sup>In addition to the 17 IPTC topics, we include two auxiliary categories—*Other* and *Obituary*—for items that fall outside the taxonomy or are obituaries.

<sup>15</sup> Inter-annotator agreement between the two human raters was 87% (Cohen's  $\kappa = 0.85$ ).

<sup>16</sup> See §A, which notes that many outlets rely on self-reported or infrequently updated print figures and that the series does not capture digital subscribers.

culation of 10-50K. Only 20.1% of articles come from very large nationally-circulated publications with average circulations over 50K.<sup>17</sup>

### 3 Analyzing AI use in newspapers

How much of recent news contains AI-generated content, and when and how do journalists use AI? Using our `recent_news` dataset, we investigate *where* AI-generated content appears, considering factors such as circulation, ownership, language, and article topic. We also explore *how* it is used, looking at differences between **MIXED** and **AI-GENERATED** articles, factual details, and disclosure.

### **3.1 How often is AI used in American newspapers?**

We find that **9.1%** of the 186K articles in recent\_news are labeled by Pangram as either **AI-GENERATED** (5.2%) or **MIXED** (3.9%), while the remaining 90.9% of articles are classified as **HUMAN-WRITTEN**. The rest of this section goes beyond these aggregate numbers to examine AI use as a function of different fine-grained aspects like topic and ownership.

**AI use is higher in local newspapers.** Local communities are hardest hit by “news deserts,” places with little to no access to credible local news, with shrinking reporting capacity due to limited resources (Metzger, 2024). Thus, smaller outlets rely on AI more than national newspapers: only 1.7% of articles at papers with circulation >100K are labeled as **AI-GENERATED** or **MIXED**, versus

<sup>17</sup>Circulation distribution is depicted in Figure 10.

9.3% at papers below 100K (see Figure 16).<sup>18</sup> Our results suggest that large national newspapers enforce stricter editorial constraints on automation than local papers. We also observe significant state-level variation: AI use is highest in newspaper articles published in the mid-Atlantic and southern US, with Maryland (16.5%), Tennessee (13.6%), and Alabama (13.9%) taking the top three spots (Figure 1). Meanwhile, the Northeast remains relatively unaffected, with New Hampshire (2.9%) and Massachusetts (3.4%) both ranking in the bottom three states in terms of AI use.

**AI use varies with topic.** Prior work has shown that factual, data-heavy content (e.g., reports about weather, finance, or sports) is particularly amenable to automation (Medill Local News Initiative, 2024).<sup>19</sup> Consistent with this, weather articles in our dataset exhibit the highest average AI likelihood (27.7%), as shown in Figure 2. However, we also observe high AI use in other topics, such as science and technology (16.1%) and health (11.7%), while content on more sensitive issues such as conflict and war (4.3%), crime, law, and justice (5.2%), and religion (5.3%) exhibit lower rates.

**AI use varies with ownership.** Many of the newspapers in recent\_news share common ownership: for example, Advance Publications owns many widely-read outlets like [pennlive.com](#), [cleveland.com](#), and [al.com](#) and often syndicates articles among them. While some ownership groups view AI use as a reputational risk, others emphasize cost reduction and efficiency gains (Medill Local News Initiative, 2024). In our dataset, Boone News Media has the highest percentage of partial or complete AI-content detected (20.9%), well above the second highest, Advance Publications (13.4%). In contrast, Nash Holdings, Lee Enterprises, Adams Publishing Group, and Digital First all have AI use rates under 2%. We note the irony of several prominent media groups suing AI companies over training language models on their content (e.g., *Advance Local Media v.*

<sup>18</sup>At the article level, this difference is highly significant ( $\chi^2(1) = 1175.6$ ,  $p < 10^{-250}$ ). At the newspaper level, smaller outlets averaged 8.5% AI content compared to 5.0% among very large outlets, a statistically significant gap (Welch's  $t(\approx 23) = 2.24$ ,  $p = 0.032$ ,  $d = 0.22$ ).

<sup>19</sup>As journalist Tom Rosenstiel notes, “If it’s the weather report, who the hell cares? If it’s a story about Latino culture, that could be a problem.” 

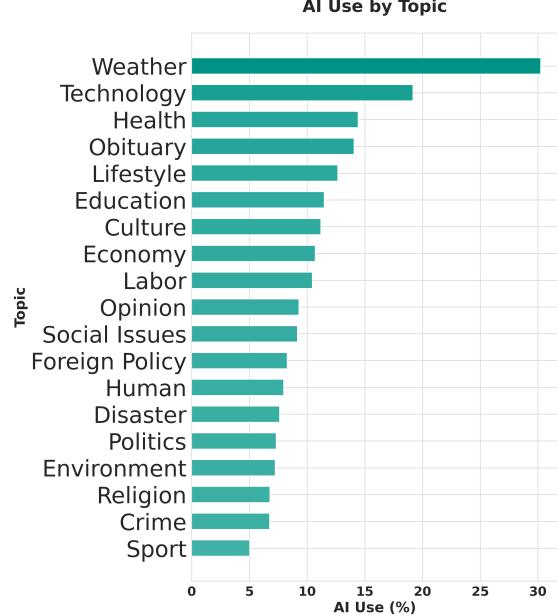


Figure 2: AI use by topic in recent\_news. Weather, science/technology, and health exhibit higher AI use than topics like conflict, crime/justice, and religion.

*Cohere*<sup>20</sup> even as they churn out LLM-generated articles.

**AI use varies by topic across ownership groups.** Figure 3 shows how different ownership groups use AI. Advance Publications, for instance, relies heavily on AI for weather reporting (74.4% AI Use). Boone Media exhibits the broadest adoption, with especially high rates in science and technology (58.3%) as well as lifestyle and leisure (32.9%). Other chains show narrower topical patterns, such as Adams Publishing Group in obituaries (27.4%) and Lee/BH Media in foreign policy coverage (20.0%). These results show that AI integration is vastly uneven across both topic and ownership groups.

**AI use is higher in languages other than English.** AI-generated content is more prevalent in news articles written in languages other than English.<sup>21</sup> As shown in Figure 4, only 8.0% of English-language articles in recent\_news are classified as **AI-GENERATED** or **MIXED**; this share rises to 31.0% for articles in other languages.<sup>22</sup>

<sup>20</sup>Advance Local Media LLC v. Cohere Inc., No. 1:25-cv-01305, S.D.N.Y. filed Feb. 13, 2025.

<sup>21</sup>A Pangram study shows that it is also a strong multilingual AI detector.

<sup>22</sup>We note the possibility that machine-translated articles are being misclassified as AI-generated. However, our small-scale verification suggests that human-written articles are still correctly identified as human even after machine translation.

POLICY CATEGORY	REQ	EXAMPLE PUBLICATIONS / OWNERS	ILLUSTRATIVE DISCLOSURE TEXT
AI ALLOWED	7	<i>Ionia Sentinel-Standard, Amsterdam News, Penn Live</i>	"If AI-assisted content is approved for publication, journalists must disclose the use of AI and its limitations to their audience. AI-generated content must be verified for accuracy and factuality before being used in reporting."
AI PROHIBITED	2	<i>New York Post, Michigan Daily</i>	"The use of generative artificial intelligence for content production (including written, visual and auditory content) is unacceptable in all circumstances. Any staffer found to have used generative AI to produce content for The Daily can be fired by their section editor or the Editor in Chief."
NO PUBLIC POLICY	91	<i>Daily Register, Hudson Reporter, LA Opinion</i>	No disclosure found on website.

Table 2: AI disclosure policies among 100 sampled U.S. news outlets. The overwhelming majority of publications have no clear public policy on AI use. Publications with permissive policies all include stipulations that AI-generated material is verified and edited by humans. We note that all of the articles we checked for disclosure were labeled as **AI-GENERATED**; thus, the sample is not broadly representative of all newspapers.

The vast majority ( $\approx 80\%$ ) of these are Spanish-language pieces published by U.S.-based outlets serving bilingual audiences (7.2K articles).<sup>23</sup> This suggests that higher AI use is concentrated in domestic Spanish-language reporting, reflecting how translation tools and localized automation may lead to differences in AI adoption per language. On a geographic level, many states exhibit high average AI use in languages other than English (Figure 17).

### 3.2 Characterizing AI use in American newspapers

Our above analysis establishes that (1) many published newspaper articles today are written partially or entirely by AI, and (2) AI use varies across factors like ownership, topic, and language. Here, we ~~delve~~ investigate important questions about authorship, transparency, and public trust. Our analysis reveals that journalists often use AI in conjunction with their own writing rather than a full replacement, that prestigious outlets rely more on **MIXED** authorship, and that disclosure of AI involvement is strikingly rare. Together, these findings show not only how AI is changing journalistic practices all over the country, but also why it matters whether readers are informed about its role.

**Many articles have mixed authorship.** While **MIXED** authorship articles include at least some human writing, it is difficult to tease apart the exact contributions of the reporter compared to AI (Thai et al., 2025). Did the reporter write a full draft and have the AI edit it for style and grammar, or did the reporter provide a brief outline and ask the AI to generate the full article? These questions are espe-

cially salient given the relatively high proportion of mixed authorship articles: of the 17,059 articles we detect as using AI, 42.7% are predicted as **MIXED**, while 57.3% are classified as **AI-GENERATED**. At the author level, 1,453 out of 34,608 writers produce at least some AI content. Among them, the majority (54.8%) primarily publish mixed articles, while 36.1% rely mostly on AI-generated text. These findings resonate with survey evidence from Radcliffe (2025), who report that over half of journalists use AI to edit their work, while only about a third employ it to generate text directly.

**AI use is largely undisclosed.** Disclosure of AI use (e.g., exactly how and where AI was used in the construction of the article) is especially important to maintain audience trust. Readers might be okay with small AI edits for style in a **MIXED** article, but they require proper disclosure to make these judgments. Unfortunately, in a sample of 100 AI-flagged articles from unique newspapers in the `recent_news` dataset, we find that 95% of authors and 91% of publishers did not disclose AI use (Table 2). The few disclosures we observed appeared only in environmental reporting, such as weather forecasts and air quality alerts. Among seven publications with formal disclosure policies, just five articles complied while another two violate their own policies by omitting disclosure. Notably, two newspapers with explicit bans on AI use, New York Post and Michigan Daily, violated their own disclosure policies, publishing articles that Pangram flagged as **AI-GENERATED**. Although all policies allowing AI use require reporters to verify AI-generated content for factual accuracy, it is uncertain whether these checks are consistently carried out.

<sup>23</sup>Other major languages include: Portuguese (468), Vietnamese (403), French (343), and Polish (314).

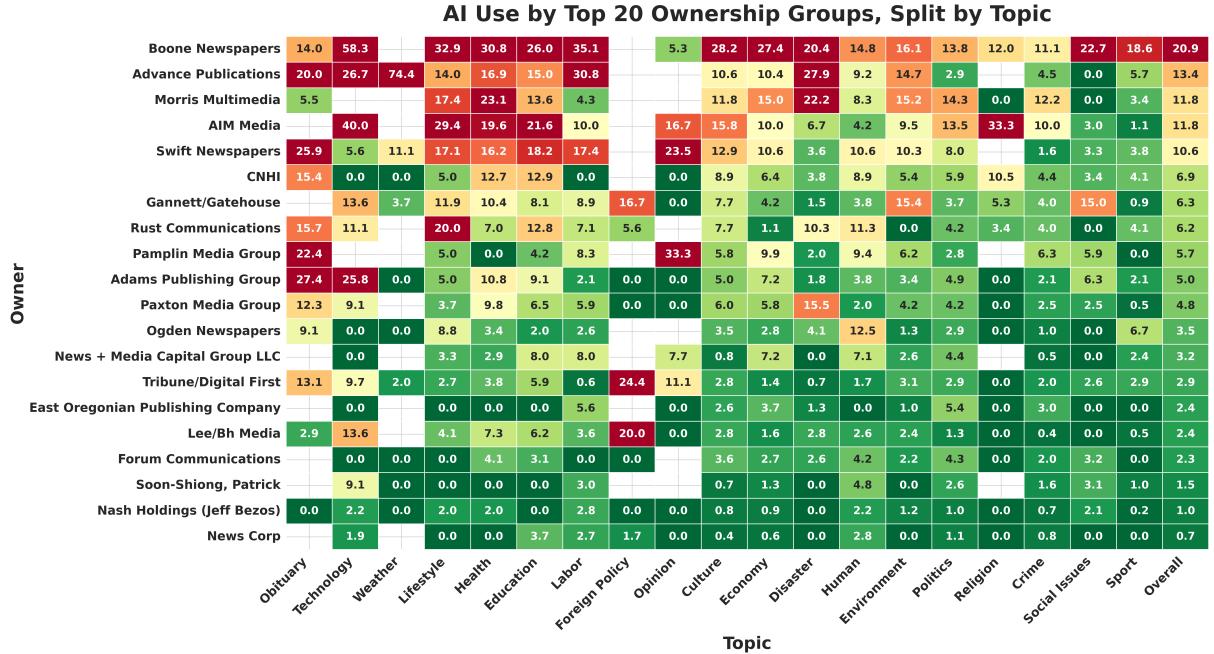


Figure 3: Heatmap of AI use by publication owner and article topic in `recent_news`. Some owners disclose AI use for specific content, such as [Advance Publications](#) for weather reports, but the biggest adopters, such as [Boone Newspapers](#), use AI broadly across many topics. Note that only 52% of `recent_news` has ownership information, and only topics that have at least 5 articles per owner are visualized in the heatmap.

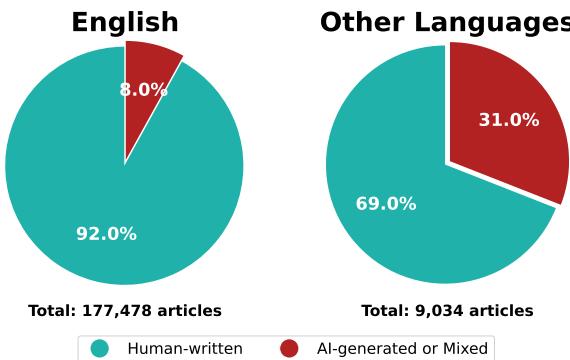


Figure 4: AI use in `recent_news` is more frequent in languages other than English. The most prominent such languages include Spanish, Portuguese, Vietnamese, French, and Polish.

**Many AI-generated articles contain authentic quotes.** To examine whether [MIXED](#) and [AI-GENERATED](#) articles include fabricated information, we analyze the authorship of quotations in these articles. Specifically, we extract all quotes in the dataset longer than 50 words,<sup>24</sup> and run each of them through Pangram individually. Note that Pangram’s reliability degrades on shorter texts, and so we are unable to perform this analysis on all quotes. Within the subset of articles that include at least one quote >50 words long, 76.1% of articles

<sup>24</sup>See §C.1 for more details on this experiment.

flagged with AI use contain at least one human-written quote. This suggests that many stories written with AI use rely on authentically sourced material. However, it remains unclear whether journalists are choosing these quotes and feeding them into a prompt for AI generation, or if the AI is also doing quote selection (see Table 3 for examples).

**Notable individual cases of AI use.** We identify several unique cases of AI-generated writing in `recent_news`, snippets of which are shown in Table 3. One outlet, [Argonaut](#), turned out to be an entirely AI-generated newspaper with AI reporter personas who “write” exclusively [AI-GENERATED](#) articles (e.g., , ). Another reporter appears to have revisited and republished their older work, producing updated AI-assisted versions of previously [HUMAN-WRITTEN](#) stories (e.g., [edited \(2025\)](#): , ; [original \(2021\)](#): , ).<sup>25</sup> More concerningly, we also found AI-generated responses in a popular advice column, *Dear Annie*, a practice that risks betraying the trust readers place in such personal guidance (e.g., [Reader:](#)  , [Annie:](#)  ).<sup>26</sup> We also see obituaries frequently

<sup>25</sup>Earlier versions were retrieved via the Internet Archive’s Wayback Machine.

<sup>26</sup>We were unable to scrape the *Dear Annie* column to quantify AI use because its publication across many different websites made it difficult to access archival content.

NEWSPAPER	PREDICTION	ARTICLE EXCERPT	OBSERVATIONS
ARGONAUT	AI-GENERATED	“...The forms of commerce have drastically changed, with constant evolution to meet consumer needs and market dynamics . From brick-and-mortar stores, e-commerce, and omnichannel strategies to pop-up shops and outdoor commerce, businesses need to remain adaptable to thrive in this ever-changing commercial landscape ...”  	Fully AI-generated text with a very generic conclusion. No details about the author exist online, and when we further investigated the site, no details could be found about any of its staff.
CALEXICO CHRONICLE	HUMAN-WRITTEN	“...This grant represents an important step forward in our efforts to create healthier, more sustainable learning environments for our students. By increasing shade and greenery across our campuses, we’re not only improving outdoor comfort and air quality, but also setting an example of environmental responsibility for our students and community...”  	While this article is detected as human-written, it includes an AI-generated quote that was likely provided to the reporter  . Reporters who write their own articles may not be aware that the people they quote in their articles used AI to create their response.
WASHINGTON POST	MIXED	“...Finally, focus on who and where else you can seek support from. Is there even one family member or community member you can turn to and tap in for support and allyship as you navigate these familial struggles?  	AI use often occurs even in high circulation papers like <i>Washington Post</i> . In this advice column, a person writes in feeling lonely, only to receive partially AI-generated advice.
SALINE RIVER NEWS	AI-GENERATED	“We are extremely grateful to the ANCRC for awarding this second grant in support of the second phase of renovations of the Visual and Performing Arts Center. This funding reinforces our ongoing stewardship of a building that holds a meaningful place in UAM’s history...” 	While this article is detected as AI-generated, it includes an authentic and relevant statement made by Dr. Peggy Doss  . This example shows one way that reporters can use AI to generate articles centered around information they have gathered.
OREGON LIVE	AI-GENERATED	“...Saturday is likely to be the warmest day, with temperatures reaching the upper 70s to low 80s in the Willamette Valley. Saturday evening will bring increasing clouds as a frontal system approaches, however, leading to widespread light rain on Sunday... ...Generative AI was used to produce a draft of this story based on information from the National Weather Service.”  	Oregon Live (owned by Advance Publications) notes in the article that generative AI was used to produce a draft of this weather report, which is then reviewed by staff.

Table 3: Notable cases of AI use in the recent\_news dataset. Words and phrases identified as indicative of AI use by Pangram are highlighted in red. AI use takes many forms, from completely made-up news sites to AI responses to advice columns (e.g., *Dear Annie*), legitimate articles that happen to quote AI-generated text from other sources, and highly-templated topics like weather and sports reports.

flagged as containing AI-written text, possibly reflecting submissions drafted by family members using generative tools (e.g., , ).

**AI use in print.** Many AI-GENERATED articles in recent\_news appear in print in addition to the online editions (see Figure 5 for an example). According to a 2025 Pew study, the print audience still includes an estimated 65 million Americans who read physical newspapers “often” or “sometimes” (Pew Research Center, 2025). Critically, this group is heavily skewed towards an older demographic less likely to be technologically savvy, with a median age of 57.9 (Conaghan, 2017). We further note that readers of print newspapers face higher barriers to verifying content, in contrast to digital readers who can simply copy and paste text into search engines. Thus, newspapers that *only* appear in print are much harder to audit using our methodology.

## 4 Opinions

Opinion articles play a large role in shaping public attitudes, especially those authored by trusted figures such as Nobel laureates, elected officials, and journalists. Even a single op-ed can significantly shift beliefs (Coppock et al., 2018; Bai et al., 2025). As LLMs are often more persuasive than humans (Salvi et al., 2025; Schoenegger et al., 2025), AI-generated opinion writing raises concerns of misinformation and ideological amplification (Weidinger et al., 2022; Nehring et al., 2024). To assess these risks, we examine opinion articles written from 2022-2025 in three of the most highly circulated national newspapers (New York Times, Washington Post, and Wall Street Journal). While AI use in opinions remains low relative to recent\_news, it has risen sharply following mainstream LLM adoption and is also almost completely undisclosed.

**AI use in opinion articles published at reputable newspapers has increased by 25x over the past**



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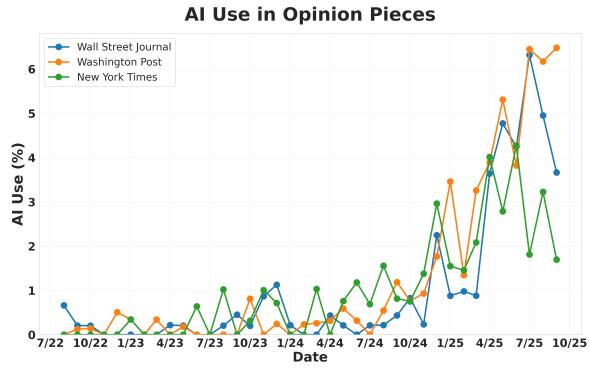
Figure 5: An example of an article found in print which was identified as **AI-GENERATED** in recent\_news. Even readers who get their news exclusively from print media are exposed to AI-generated articles. 📰

**three years.** To see whether AI-generated material has risen over time, we measure the share of opinions flagged as AI between September 2022 and September 2025. AI use increases from 0.1% in 2022 to 3.4% in 2025, about a  $25\times$  rise, consistent across the three outlets.<sup>27</sup> By outlet, the AI use share grows from 0.1% to 3.4% at the Wall Street Journal, 0.2% to 4.3% at the Washington Post, and 0.0% to 2.6% at the New York Times (Figure 6).

**Opinions exhibit higher AI use than other sections (June–September 2025).** Across the three outlets, AI use is 6.4 times more likely to occur in opinion pieces than non-opinion news articles published by those same outlets<sup>28</sup> between June–September 2025 (4.56% vs. 0.71%;  $n=3,420$  opinions,  $n=10,129$  all articles). By outlet, the gap is largest at *The Washington Post* (5.51% vs. 0.55%), followed by *The Wall Street Journal* (4.99% vs. 0.74%), and smaller at *The New York Times* (2.94% vs. 1.80%). Looking more closely at how AI is used, **MIXED** dominates in both settings (86.5% of AI use in opinions and 86.1% of AI use in non-opinion articles at the same outlets). Without clear disclosure standards, readers cannot dis-

<sup>27</sup>Across all opinion pieces in our sample, 0.1% are labeled **AI-GENERATED** and 0.8% **MIXED**; see Figure 19.

<sup>28</sup>These non-opinion articles are extracted from recent\_news, which includes WSJ, WaPo, and NYT; see Table 11 for more details.



Publication	Label	Author	Title
<b>U.S. Politics &amp; Governance</b>			
NYT	AI-GENERATED	<b>Jeff Flake</b> , Ex-U.S. Senator	The Republican Fever Must Break. 📈 📰
WaPo	MIXED	<b>Shadi Hamid</b> , Political scientist	My gut instinct on Trump's D.C. power grab was wrong. 📈 📰
WaPo	AI-GENERATED	<b>Ellen McCarthy</b> , Former Assistant Secretary of State for Intelligence and Research	It's not too late to spare this crucial intelligence agency 📈 📰
WSJ	MIXED	<b>Mike Pence</b> , Former U.S. Vice President	Ed Feulner Built Institutions in Support of American Values 📈 📰
<b>Public Health</b>			
NYT	MIXED	<b>Rick A. Bright</b> , Immunologist	America Is Abandoning One of the Greatest Medical Breakthroughs. 📈 📰
WSJ	MIXED	<b>Robert F. Kennedy Jr.</b> , U.S. Secretary of Health and Human Services	We're Restoring Public Trust in the CDC 📈 📰
WSJ	AI-GENERATED	<b>Nicole Saphier</b> , Physician, Fox News commentator	The Madness in RFK Jr.'s Autism Method 📈 📰
<b>War &amp; National Security</b>			
WSJ	AI-GENERATED	<b>John Spencer</b> , Urban warfare scholar	Netanyahu Wisely Arms Gaza Clans to Fight Hamas 📈 📰
NYT	AI-GENERATED	<b>Stanley McChrystal</b> , Retired U.S. Army general	Be Not Afraid. 📈 📰
WSJ	MIXED	<b>J. D. Crouch II</b> , Former U.S. Deputy National Security Advisor	The Case for Space Defense. 📈 📰
<b>Cybersecurity</b>			
WaPo	MIXED	<b>Elise Stefanik &amp; Stephen Prince</b> , U.S. Representative & CEO of TFG Asset Management	Cyber warfare has arrived. Here's the United States' best defense. 📈 📰
WSJ	MIXED	<b>Aaron Kaplowitz</b> , Founder of 1984 Ventures	Can AI and Drones Replace Soldiers and Jets? 📈 📰
NYT	MIXED	<b>Fay M Johnson</b> , Principal Product Manager	Ye and the Limits of Free Speech 📈 📰
<b>Technology</b>			
WSJ	MIXED	<b>Pat Gelsinger</b> , Former Intel CEO	A Sovereign-Wealth Fund to Keep America's Technological Edge; 📈 📰
WaPo	MIXED	<b>Michael Botta</b> , Cofounder & President of Sesame	This new tool is not your parents' Dr. Google. 📈 📰
WaPo	MIXED	<b>Laura Manley</b> , Executive Director of Harvard's Shorenstein Center	We need a Freedom of Information Act for Big Tech 📈 📰
<b>Law &amp; Justice</b>			
NYT	AI-GENERATED	<b>Kaj Larsen</b> , Journalist, ex-Navy SEAL	What the 'Rust' Shooting Case Is Really About. 📈 📰
WSJ	AI-GENERATED	<b>Edward Blum</b> , American conservative activist	Trump and the Secrets of College Admissions 📈 📰
WSJ	AI-GENERATED	<b>Joshua Claybourn</b> , Attorney	"Why We're Joining the Legal Fight Over Trump's Tariffs" 📈 📰

Table 4: A sample of op-eds detected as either across **MIXED** or **AI-GENERATED** from WSJ, WaPo, and NYT. Op-ed writers often are broadly recognized figures and write about polarizing topics such as politics, war, and public health, making the disclosure of AI imperative.

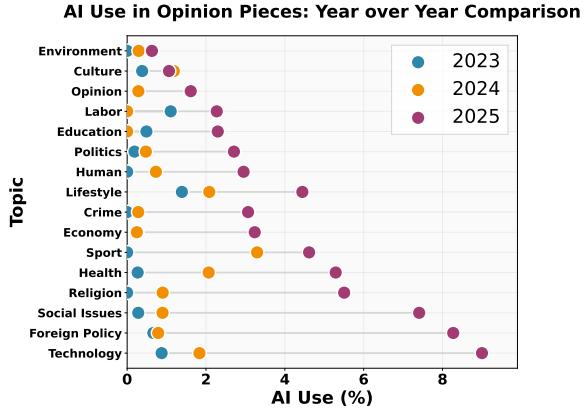


Figure 7: Changes in AI use in opinions articles year over year (2025 only includes January 1 - September 15). AI likelihood increased across all topics, with especially large gains in opinion articles about Science & Technology, consistent with topic trends in recent\_news.

and peace (12x), human interest (10x), and politics and government (9x). These patterns indicate that AI use in opinion writing extends well beyond scientific domains and into political, economic, and broadly human-centered discourse.

## 5 Tracking reporter adoption of AI

In this section, we analyze `ai_reporters`, a longitudinal dataset for 10 veteran reporters (5 male and 5 female) who published articles both before and after ChatGPT’s release (November 2022) and had at least three articles in `recent_news` identified as either **AI-GENERATED** or **MIXED**.<sup>29</sup> For each reporter, we scrape all of their available online articles and run the same detection pipeline detailed in §2 (see §A for more details about data collection). We note that since the reporters selected for this analysis have multiple articles flagged for AI use in `recent_news`, they are not representative of all reporters. Nevertheless, they give us valuable insight into some of the heaviest adopters of AI in modern American journalism.

**AI use by these reporters rises from 0% pre-ChatGPT to 40% in 2025.** Figure 8 shows a near-absence in AI use prior to November 2022

<sup>29</sup>All but one reporter are veteran reporters, often with decades of experience. However, due to technical difficulties associated with scraping specific websites, we could not obtain *all* of their older articles. The one early-career reporter started their career in 2021, and thus had less exposure to the profession prior to the release of ChatGPT. The reporters collectively cover a variety of topics ranging from local government, public safety, and environmental justice to national politics, racial equity, LGBTQ+ rights, Caribbean-American culture, economic development, and community sports.

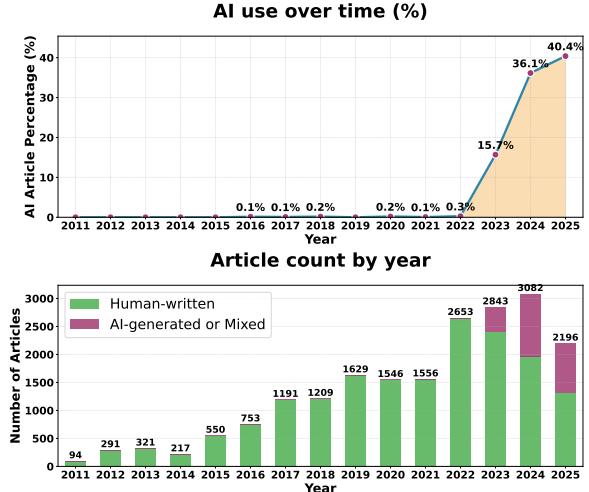


Figure 8: AI adoption takes off after ChatGPT’s release in late 2022 with the ten reporters in our `ai_reporters` sample.

before rising sharply to 15.7% in 2023, 36.1% in 2024, and then 40.4% in 2025. This result also serves as a sanity check on Pangram’s reliability: as all of these reporters published articles pre-ChatGPT that were correctly detected as human-written, it is unlikely that their unique writing styles are a source of false positives.

**While AI use varies across this cohort of reporters, none discloses their use.** We observe high variance in AI use across these ten reporters. While some show a negligible increase in articles flagged with AI use (from 0% in 2022 to about 2.3% in 2025), others are far more receptive. For instance, 90.1% of the most prolific author’s 2025 articles were classified as **MIXED** or **AI-GENERATED**, up from 0% in 2022 (see individual plots in §C.3). Importantly, none of the ten reporters disclose use of AI to their readership.<sup>30</sup>

**AI traces are visible in the articles.** Perhaps not surprisingly, we observe qualitative differences between the articles marked for AI use and the human-written ones. For instance, AI-assisted articles in this subset have up to 11.53x more em dashes than those authored entirely by humans (Table 5, **Reporter 5**). Furthermore, human-written articles tend to be more concrete, naming specific people and locations (**Reporter 1**) and focus more on factual knowledge than vague statements (**Reporter 2**).

<sup>30</sup>We reached out to each reporter in this cohort with a publicly-available email address in an effort to learn more about their AI use, but (perhaps unsurprisingly) we received no responses.

REPORTER	HUMAN-WRITTEN	AI-GENERATED	OBSERVATION
👤 1	<p>"Problems associated with the past California administration seem to have dissipated as the IID and Newsome government officials are on the verge of agreeing to a plan restoring the lower part of the Salton Sea as reported by Water Manager Tina Shields during the April 30 meeting. ..."</p> <p>(2019-05-06) 📚 📱</p>	<p>"The State of California has established the Salton Sea Conservancy under the Salton Sea Conservancy Act, a comprehensive initiative to reverse decades of ecological damage and promote sustainable development in the Salton Sea region. This new state agency, housed within the Natural Resources Agency, is poised to lead the charge..."</p> <p>(2024-11-18) 📚 📱</p>	The human-written article names specific relevant people, times, and pinpoints the main point of the article, the restoration of the Salton Sea. In the AI article, the conservancy act is tied to lofty statements such as 'decades of ecological damage'.
👤 2	<p>"Tributes have continued to pour in for the Rev. Jesse Jackson, who announced on July 14 his retirement as President and CEO of the Rainbow PUSH Coalition, the influential civil rights organization he started decades ago to carry on the struggle for equality and justice that Dr. Martin Luther King Jr. fought heroically. The organization said Rev. Dr. Frederick D. Haynes III will succeed Jackson. ..."</p> <p>(2023-07-23) 📚 📱</p>	<p>"Jackson, a protégé of the Rev. Martin Luther King Jr., founded Operation PUSH in 1971, which later evolved into the Rainbow PUSH Coalition. The organization has been instrumental in promoting minority hiring and voter registration drives in communities of color and has played a significant role in American politics...."</p> <p>(2024-04-16) 📚 📱</p>	The human-written piece focuses more on factual information about PUSH and also includes more specifics (e.g., July 14th). In the 2024 AI-generated article, Jackson's work is described more vaguely, with less emotion and more cliche AI phrases.
👤 3	<p>"One shouldn't need a reason to buy Black, it should be a way of life. Such is the thought process for several Black business owners and individuals who hang their hat on the idea of supporting within to keep the Black dollar circulating longer in local neighborhoods, mom-and-pop shops, and places that need it most..."</p> <p>(2023-02-15) 📚 📱</p>	<p>"The spending power of the Black dollar stands at a staggering \$1.7 trillion, reflecting immense potential for community growth and economic empowerment. This financial strength, however, is underutilized, prompting a crucial need for increased and unconditional support within the African American community..."</p> <p>(2023-11-29) 📚 📱</p>	In the human-written article, the reporter uses unique phrases like 'hang their hat' and 'mom-and-pop shops', focusing on specific ways the reader could buy from Black businesses. In the latter, the "author" makes sweeping claims about the financial state of Black businesses in a more general manner.
👤 4	<p>"The UN General Assembly met on Tuesday afternoon in Emergency Special Session on the decades long Israel-Palestine conflict and as the ongoing crisis in Gaza shows no signs of abating. Member States adopted a resolution, demanding an "immediate humanitarian ceasefire", the immediate and unconditional release of all hostages..."</p> <p>(2024-06-20) 📚 📱</p>	<p>"The Government of Guyana has expressed its support for the United States' call for a ceasefire in the ongoing conflict between Israel and Gaza. In a recent statement, the Guyanese government acknowledged the three-phase plan proposed by U.S. President Joseph Biden on May 31, 2024, aimed at ending Israel's war on Gaza..."</p> <p>(2025-03-21) 📚 📱</p>	In the human-written article, the author references the time (Tuesday) and setting (Emergency Special Setting). In the AI-generated article, the author uses more fluff words and more vague time placement (i.e. ongoing, recent).
👤 5	<p>"The Rancho Simi Recreation and Park District board spent much of its Oct. 4 meeting discussing the impending switch next year to by-area elections. Questions were raised about whether unincorporated areas like Oak Park and Santa Susana Knolls should form a single election area..."</p> <p>(2023-10-21) 📚 📱</p>	<p>"The Simi Valley City Council is putting a spotlight on retaining and supporting its workforce — particularly police officers and key city staff — as part of a newly adopted list of priorities for the rest of the year. The goals, which also include exploring artificial intelligence to improve services..."</p> <p>(2025-08-16) 📚 📱</p>	The AI-generated article from the author reflects shifting writing patterns such as greater formality and use of the em dash. In contrast, the human-written article reports on specific dates and people, as well as using more informal language such as shortening October to Oct.

Table 5: Excerpts from passages of newspaper articles written by reporters in the ai\_reporters dataset. Words and phrases identified as indicative of AI use by Pangram are highlighted in red. In the left HUMAN-WRITTEN column, excerpts of older, human-written articles are displayed, while the AI-GENERATED column shows newer articles by the same author detected as AI-generated. When AI use is present, articles by these reporters include fewer specific details, broader time markers, and loftier language.

## 6 Related work

**AI use in news media.** Recent scholarship maps how generative AI is impacting newsroom practices. Recent case studies document both benefits and frictions caused by AI inside of news organizations (Brigham et al., 2024; Jones and Jones, 2025; Ansari et al., 2025), while recent industry policies study the adoption, governance, and platform–publisher dynamics (Simon, 2024; Brown and Jaźwińska, 2025; Simon et al., 2025; Meir, 2023).

**Effects of disclosing AI in news.** Disclosure reliably changes how readers judge identical content (Longoni et al., 2022). In recent surveys,

comfort reading AI-generated material was low (AI-GENERATED: 19%; MIXED: 30%) (Newman et al., 2025). Disclosing machine authorship reduces perceived credibility (Toff and Simon, 2025; Lee et al., 2025), yet readers rarely detect AI without cues and experience (Brown et al., 2020; Clark et al., 2021; Russell et al., 2025). Moreover, disclosure labels often fail to reduce persuasive impact (Gallegos et al., 2025). Despite these mixed effects on perceived credibility, transparency in AI use is important: ethically, newsroom standards emphasize being accountable to the reader (Meir, 2023; Viner and Bateson, 2023) and practically, would enhance trust between readers and news outlets using AI (Newman et al., 2025).

**Measuring AI content in other domains.** Prior studies audit the growing presence of LLM-generated text across academic and creative domains. In scholarly settings, the influence of AI is measured in peer reviews (Liang et al., 2024a; Zhou et al., 2025) and academic papers (Liang et al., 2024b; Luo et al., 2025; Kobak et al., 2025). Gupta and Pruthi (2025) uses AI detection to identify patterns of plagiarism in generated research. Similar detection efforts in creative domains examine AI-generated media on art platforms, Wikipedia, social networks, and news/misinformation websites (Matatov et al., 2025; Brooks et al., 2024; Sun et al., 2025; Hanley and Durumeric, 2024). Other studies trace the adoption of AI in public communication and consumer complaints (Liang et al., 2025; Shin et al., 2025).

## 7 Conclusion

Our analysis provides the first large-scale audit of AI use across **250k** articles from three complementary corpora of U.S. newspaper articles. We find that AI use is both *widespread* and *uneven*: roughly 9% of recent articles are flagged as either partially or completely AI-generated, with particularly high rates in smaller local papers, specific topics, ownership groups, and languages other than English. In highly-reputed national newspapers, we observe AI use in opinion pieces is rapidly increasing (from 0% in 2022 to 3-4% in 2025), much more so than in other news articles published by the same papers. Based on our audit, we suggest some disclosure policies that newspapers could consider adopting to improve public trust regarding AI use:

- 1. Guidance for mixed authorship:** editorial standards should publicly outline what kind of AI use is acceptable without disclosure if any (e.g., grammar checks, style edits), acceptable with disclosure (e.g., summarization, more in-depth rewrites), and not permitted at all (e.g., full article generation). Reporters should record notes and/or log their AI use during the writing process, as these can be useful for more informative disclosure.
- 2. Explicit AI policies for external contributors:** Since opinion pieces exhibit high AI use at top papers, particularly those written by guest contributors, we propose that author attestations about AI use are collected along with article submissions. Editors may addi-

tionally want to check submissions (automatically or manually) for AI cues (Russell et al., 2025) and publish standards on what they deem acceptable AI use in opinion pieces.

## Ethical Considerations

Our data was collected from publicly accessible newspaper sites, either through RSS feeds or available archives. Given the sensitivity of large-scale text collection, we do not release the complete article texts, but instead provide metadata to respect the rights of content owners. We identify AI-generated text using Pangram, an AI detection model. While Pangram does exhibit very low false-positive rates in benchmark testing, it is not infallible. We do not attribute any intent, misconduct, or ethical lapses to the individual journalists and newspapers flagged by the model. Rather, we purposely use large-scale data collection to understand AI use trends at an aggregate level. We aim to understand what trends in AI use appear across the industry rather than making judgments about specific cases.

## Limitations

Our study focuses primarily on AI use in the U.S. press in English-language publications. While we connect our work to prior studies about hallucination and factual errors in language model generations, we do not perform a large-scale evaluation of the factuality of **AI-GENERATED** articles in our dataset beyond studying the authenticity of quotations. Furthermore, although articles in other languages are included in our datasets, they are comparatively much fewer in number; as such, we do not claim that this sample captures the diversity of AI use in journalism globally. **recent\_news** focuses on regional and local newspapers (although national outlets like NYT and WSJ are included), which may bias results towards the journalistic practices of smaller outlets. The inclusion or exclusion of particular newspapers is partially due to data accessibility constraints. Specifically, we are unable to obtain articles from most sites without active RSS feeds, and we are not able to include print-only newspapers. Finally, the data contains inevitable noise. Despite extensive data-cleaning efforts, metadata occasionally appears within article text, which may marginally affect AI detection and topic classification results.

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## A Dataset

In this section of the appendix we provide more details on our data collection process.

**Topic classification.** Each instance was presented to the QWEN3-8B model with the full article text and an instruction to select the single most semantically appropriate topic from the IPTC taxonomy. The complete prompt is shown in Figure 9. To verify, we randomly sampled 100 articles from the recent\_news set. Two of the authors independently re-labeled these samples according to the same IPTC taxonomy. Inter-annotator agreement between the two human raters was 87% (Cohen’s  $\kappa = 0.85$ ), reflecting strong consistency in human judgments. Agreement between the QWEN3-8B predictions and the majority human label averaged 77%, indicating moderately strong alignment between the classifier and human annotations.

**Topics present in datasets.** The classification scheme in this work builds on the 17 top-level categories defined in the International Press Telecommunications Council (IPTC) “Media Topics” taxonomy. We map each article to one of the 17 top-level topics. In addition to those categories, we include two supplementary labels — “Obituary” and “Other” — to capture content that does not cleanly fall into the predefined classes. Definitions of topics are displayed in Table 6 and the distribution of topics across the three datasets are shown in Table 7.

**Circulation definition and data source.** In the *U.S. News Deserts Database*, circulation refers exclusively to the average number of printed copies distributed per publishing day, excluding any digital readership metrics. These figures are compiled primarily from *Alliance for Audited Me-*

*dia* (AAM) audits when available, and supplemented with publisher self-reports, state press association directories, and industry trade sources for unaudited outlets. As noted in the database’s section “*Dealing with Circulation Limitations*” on <https://www.usnewsdeserts.com/methodology/>, many small newspapers rely on self-reported or infrequently updated numbers, which are treated as approximate indicators of print scale rather than precise measures of audience size. The distribution of newspapers by circulation amounts is depicted in Figure 10.

**Data coverage and overlap.** Our correlation analysis uses the subset of articles for which both AI-liability and circulation are observed. Out of 186 507 articles in total print circulation is available for 101 799 (54.58 %). At the outlet level, the main dataset contains 1560 unique newspapers, of which 776 (49.74 %) report any circulation figure. Unless otherwise noted, all circulation–AI likelihood correlations are computed on this overlapping set to avoid missing-data biases;

**Lengths of datasets.** We see that all datasets are similar lengths, with opinions being slightly longer at an average of 1078.4 tokens, compared to recent news which has an average of 787.4 tokens. Comparison of lengths shown in Figure 11.

## B AI Detection

In this section of the appendix we discuss details of how we used AI Detection models.

**Pangram prediction API details.** Pangram is a highly accurate AI detection language model (Emi and Spero, 2024). To detect AI, Pangram divides the text into segments, with each segment assigned an AI probability score before an overall confidence score and final label are produced, as illustrated in Figure 12 (labeled as ‘Highly Likely AI’) and Figure 13 (labeled as ‘Human’).

**Condensing the Pangram API labeling scope.** To standardize categories across Pangram’s short-text (single pass) and long-text (sliding-window) endpoints, we collapse the vendor’s granular labels into three meta-labels used throughout our analysis: **HUMAN-WRITTEN** = {Human, Unlikely AI}; **MIXED** = {Mixed, Possibly AI, Likely AI}; and **AI-GENERATED** = {Highly Likely AI, AI}.

**Comparison to GPTZero.** We drew a balanced sample of 1,000 articles from Pangram: 500 la-

## Prompt for classifying topic of articles

Classify the following article into the most appropriate primary topic from the IPTC taxonomy.

IPTC Primary Topics:  
 {taxonomy\_text}

Article to classify:  
 Title: {article.title}  
 Text: {article\_text}

Instructions:

1. Carefully read the article content and identify the main focus
2. Choose the most appropriate primary topic from the taxonomy above
3. Base your decision on the primary subject matter and content focus
4. Consider the description of each category when making your choice
5. If the article truly doesn't fit well into any of the listed categories, choose "Other"
6. Be specific and accurate - don't force a category if it's not a good fit
7. Respond ONLY with the classification in this exact format:

```
<classification>
Primary Topic: [exact primary topic name]
</classification>
```

Figure 9: Prompt for classifying topic of articles

Topic	Definition (IPTC summary)
arts, culture, entertainment and media	All forms of arts, entertainment, cultural heritage and media
conflict, war and peace	Acts of socially or politically motivated protest or violence, military activities, geopolitical conflicts, as well as resolution efforts
crime, law and justice	The establishment and/or statement of the rules of behavior in society, the enforcement of these rules, breaches of the rules, the punishment of offenders and the organizations and bodies involved in these activities
disaster, accident and emergency incident	Man made or natural event resulting in loss of life or injury to living creatures and/or damage to inanimate objects or property
economy, business and finance	All matters concerning the planning, production and exchange of wealth.
education	All aspects of furthering knowledge, formally or informally
environment	The protection, damage, and condition of the ecosystem of the planet Earth and its surroundings
health	All aspects of physical and mental well-being
human interest	Item that discusses individuals, groups, animals, plants or other objects in an emotional way
labor	Social aspects, organizations, rules and conditions affecting the employment of human effort for the generation of wealth or provision of services and the economic support of the unemployed.
lifestyle and leisure	Activities undertaken for pleasure, relaxation or recreation outside paid employment, including eating and travel.
politics and government	Local, regional, national and international exercise of power, the day-to-day running of government, and the relationships between governing bodies and states.
religion	Belief systems, institutions and people who provide moral guidance to followers
science and technology	All aspects pertaining to human understanding of, as well as methodical study and research of natural, formal and social sciences, such as astronomy, linguistics or economics
society	The concerns, issues, affairs and institutions relevant to human social interactions, problems and welfare, such as poverty, human rights and family planning
sport	Competitive activity or skill that involves physical and/or mental effort and organizations and bodies involved in these activities
weather	The study, prediction and reporting of meteorological phenomena
<i>Additional labels used in our classification</i>	
Obituary	Memorial and death-notice content about individuals.
Other	Articles that do not clearly align with any IPTC top-level topic.

Table 6: Top-level topics from the IPTC Media Topics taxonomy and definitions (IPTC, 2025).

Topic	recent_news (%)	opinions (%)	ai_reporters (%)
Politics and government	15.02	56.86	19.55
Economy, business and finance	10.53	9.77	2.30
Arts, culture, entertainment & media	20.55	4.87	6.55
Opinion	0.40	4.65	0.75
Health	3.75	4.47	12.92
Human interest	3.61	2.91	6.09
Crime, law and justice	10.91	2.80	7.41
Environment	4.22	2.77	4.36
Education	3.72	2.06	10.27
Science and technology	0.98	1.97	0.72
Society	1.29	1.86	3.71
Conflict, war and peace	0.54	1.72	0.35
Labor	1.54	0.96	1.45
Religion	0.74	0.94	0.69
Sport	11.24	0.69	5.28
Lifestyle and leisure	1.70	0.42	0.50
Disaster, accident, emergency	3.69	0.23	1.25
Obituary	2.48	0.04	1.49
Weather	0.76	0.01	0.37
Other	—	—	14.00

Table 7: Comparison of topic distributions between recent\_news, opinions, and ai\_reporters.

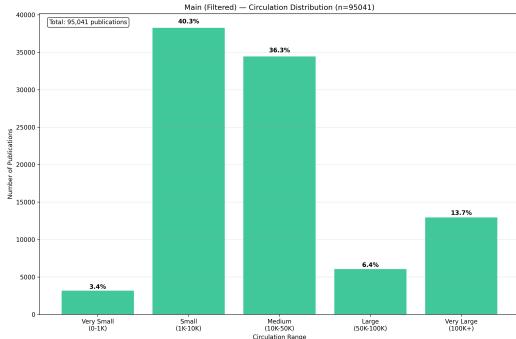


Figure 10: Distribution of circulations of articles in the recent\_news dataset.

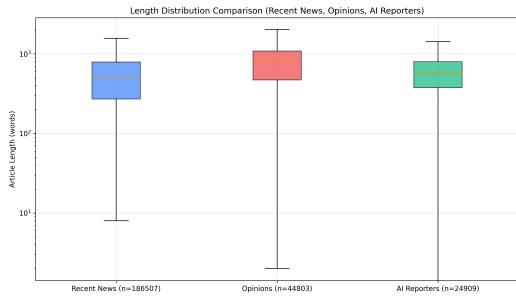


Figure 11: Comparison of the lengths of articles in recent\_news, opinions, and ai\_reporters

beled *AI / Highly Likely AI* and 500 labeled *Human / Unlikely AI*. We then ran GPTZero on the same texts; GPTZero returns human, mixed, or ai. For evaluation, we binarized GPTZero’s outputs by counting mixed as AI and compared the two detectors on this binary task. Under this protocol, we observed 88.2% raw agreement and Cohen’s  $\kappa = 0.764$  (118/1,000 disagreements).

Pangram \ GPTZero	Human	AI
Human	490	10
AI	108	392

## C Additional Results

### C.1 recent\_news

In this section, we report more results about recent\_news, a collection of over 185k articles collected between June 15th and September 15th, 2025.

**Overall AI usage in recent\_news.** recent\_news has 90.9% HUMAN-WRITTEN articles, with a total of 9.1% having AI Use. 5.2% is detected as AI-GENERATED and 3.9% is MIXED as shown in Figure 14. The distribution of AI likelihoods per each of the three labels is shown in Figure 15.s

**Newspaper-level test (below 100K vs. 100K+ circulation).** We collapse to one observation per outlet (share of AI-labeled articles) and compare newspapers below 100K circulation to those at 100K+. The below-100K group ( $n=750$ ) averages 8.47% AI articles (median 2.93%, SD 16.08, range 0–100),

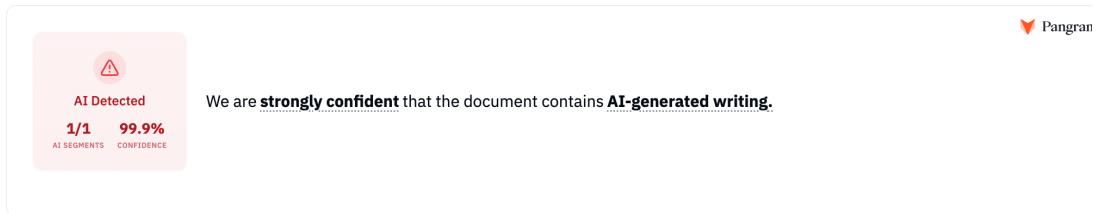


Figure 12: Screenshot of Pangram's API, . "Arkansas Department of Agriculture to host NASDA Annual Meeting" by Stuttgart Daily Leader.

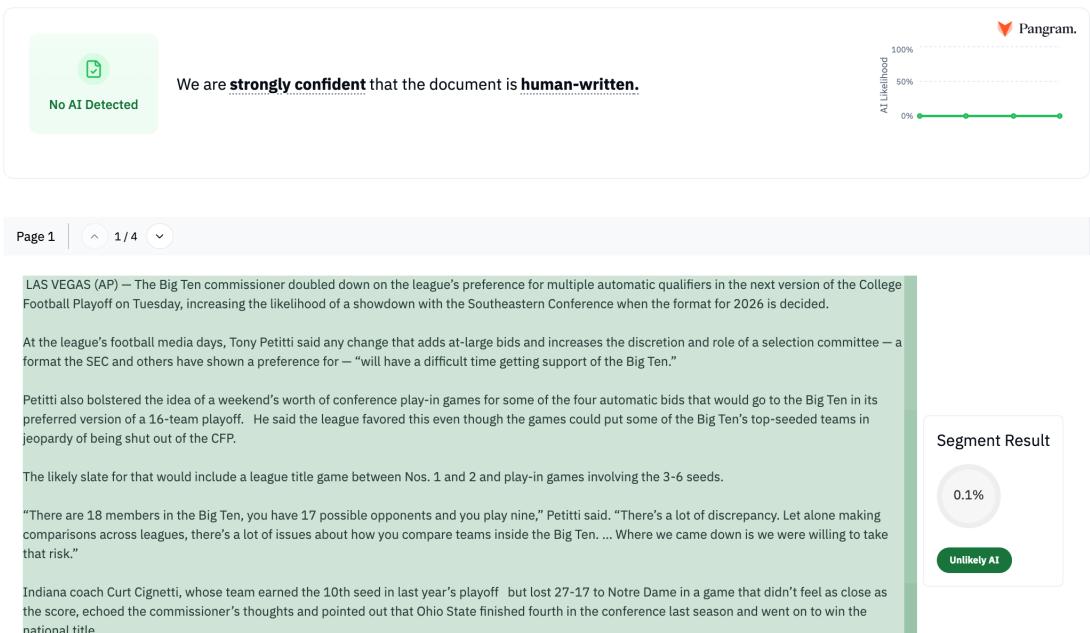


Figure 13: Screenshot of Pangram's API, . "SEC's at-large bid preference lacks support, Big Ten commissioner says" by The Associated Press

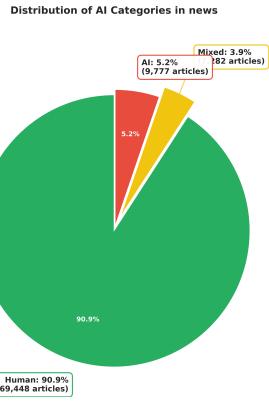


Figure 14: Distribution of AI Use predictions in recent\_news.

while the 100K+ group ( $n=24$ ) averages 4.95% (median 1.75%, SD 7.14, range 0–24.74). The difference in means is +3.52 percentage points (Cohen’s  $d = 0.22$ ). A Welch  $t$ -test indicates a statistically significant gap ( $t = 2.24$ ,  $p = 0.032$ ), whereas a Mann–Whitney  $U$  test does not ( $U = 9506$ ,  $p = 0.634$ ). The divergence reflects heavy right-skew and zero-inflation in the outlet-level shares: mean-based tests are more sensitive to a few high-AI smaller outlets, while rank-based tests emphasize the bulk of the distribution. In other words, higher AI usage is *not uniform* across smaller outlets; it is concentrated in a subset of them, while many smaller outlets have low (often zero) AI shares. Overall, we read this as modest evidence that smaller-circulation newspapers exhibit higher AI usage on average. In Figure 16, the rate of newspapers labeled as **AI-GENERATED** or **MIXED** is much lower in papers with circulation above 100k.

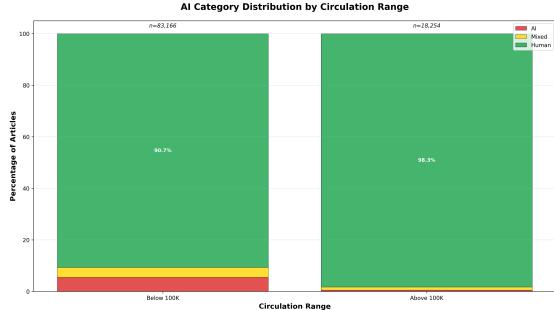


Figure 16: Distribution of AI Categories in recent\_news articles between papers with circulations below 100k (left) and above 100k (right).

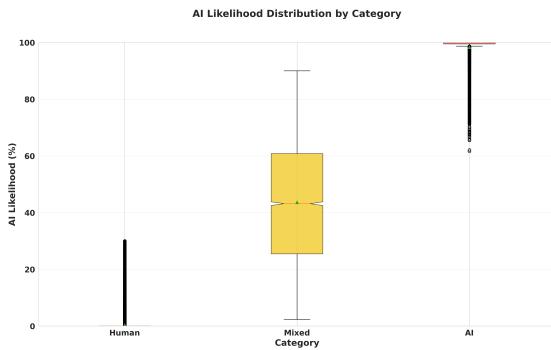


Figure 15: Distribution of AI Likelihoods per each AI Use category in recent\_news.

**Newspapers most and least likely to be using AI** The 50 newspapers most likely to be using AI based off the percentage of AI use detected in their articles in recent\_news are listed in Table 8.

**List of Newspapers with 100% Human Articles.** The following newspapers published exclusively **HUMAN-WRITTEN** articles:<sup>31</sup> *Royal Oak Review*, *West Central Tribune*, *Texas Tribune*, *cascadepbs.org*, *superioretelegram.com*, *Marysville Journal-Tribune*, *inquirer.com*, *businessobserverfl.com*, *Omaha World-Herald*, *www2.ljworld.com*, *recorder.com*, *rollcall.com*, *The Examiner*, *investors.com*, *Durango Herald*, *thejenatimes.net*, *Joplin Globe*, *Silver City Daily Press*, *Telluride Daily Planet*, *dailycal.org*,

<sup>31</sup>Note that this only represents the label distribution in our collected sample, and it is possible that a different sample (e.g., from a different time period) would give different results.

Rank	Newspaper	Articles	AI (%)	Mixed (%)	Human (%)
1	Call	123	100.0	0.0	0.0
2	Snyder Daily News	200	98.5	1.5	0.0
3	identidadlatina.com	225	91.6	2.2	6.2
4	The Florence News Journal	51	84.3	13.7	2.0
5	El Tiempo Latino	445	75.7	7.4	16.9
6	Shawano Leader	80	70.0	15.0	15.0
7	Los Banos Enterprise	104	65.4	21.2	13.5
8	acheiusa.com	260	67.7	9.6	22.7
9	nycaribnews.com	218	67.9	7.3	24.8
10	aframnews.com	105	65.7	5.7	28.6
11	richmonddregister.com	67	58.2	7.5	34.3
12	Mount Vernon News	187	56.7	8.0	35.3
13	englewoodreview.com	117	48.7	21.4	29.9
14	El Sol News	240	50.8	13.3	35.8
15	The Union City Reporter	115	32.2	53.0	14.8
16	ellatinoonline.com	187	49.2	5.3	45.5
17	suffolknewsherald.com	169	48.5	8.3	43.2
18	Imperial Valley Press	310	38.4	12.9	48.7
19	Malibu Times	58	36.2	19.0	44.8
20	westsidesattle.com	98	37.8	15.3	46.9
21	Tryon Daily Bulletin	267	38.6	9.4	52.1
22	spokesman-recorder.com	211	36.5	17.5	46.0
23	L'Observateur	62	35.5	17.7	46.8
24	fullertontobserver.com	147	33.3	16.3	50.3
25	Royal Examiner	321	30.5	27.4	42.1
26	Rockwall County Herald Banner	72	36.1	11.1	52.8
27	rockawave.com	57	36.8	8.8	54.4
28	salinerivernews.com	159	34.0	13.2	52.8
29	laprensosalatina.com	206	31.6	17.0	51.5
30	Tennessee Tribune	126	31.0	14.3	54.8
31	The Manchester Times	253	31.2	13.0	55.7
32	thebaynet.com	297	29.0	16.8	54.2
33	Indianapolis Recorder	231	28.1	17.7	54.1
34	laopinion.com	847	28.0	12.9	59.1
35	thenewirmonews.com	184	26.6	13.6	59.8
36	elplaneta.com	259	27.4	16.2	56.4
37	thepostsearchlight.com	121	27.3	9.9	62.8
38	Washington Informer	192	20.8	20.3	58.9
39	eldiariony.com	732	23.1	13.4	63.5
40	Staten Island Advance	710	22.3	14.1	63.7
41	communitynewspapers.com	421	21.9	14.5	63.7
42	businessreport.com	267	27.3	3.0	69.7
43	Sealy News	225	21.3	17.3	61.3
44	roysecityheraldbanner.com	62	22.6	11.3	66.1
45	Williamson Source	451	25.1	6.7	68.3
46	dailyvoice.com	195	20.5	12.8	66.7
47	Downey Patriot	87	20.7	11.5	67.8
48	stategazette.com	78	24.4	5.1	70.5
49	Chicago Crusader	110	20.9	10.9	68.2
50	arabamericannews.com	109	13.8	33.9	52.3

Table 8: Top 50 newspapers ranked by the proportion of AI-generated content. Percentages represent the share of each outlet's articles classified as **AI-GENERATED**, **MIXED**, or **HUMAN-WRITTEN**.

*begleyliving.com, Ketchikan Daily News, inforum.com, farmcrowdy.com, Wenatchee World, Camas-Washougal Post-Record, nhgazette.com, The Sentinel, yoursun.com, Denton Record-Chronicle, Union Democrat, Ellsworth American, jhnewsandguide.com, Dayton Daily News, Brattleboro Reformer, shelbystar.com, Albuquerque Journal, Poynette Press, Athens Messenger, mtexpress.com, detnews.com, Northwest Florida Daily News, wkuherald.com, waynepost.com, Islander, Hammonton News, dailycampus.com, High Country News, herald-courier.com, tribdem.com, Jamestown Press, Free Weekly, Westland Observer, samoacockhouse.net, Mount Desert Islander, Methow Valley News, State Port Pilot, destin.com, thepilotnews.com, Virginian-Pilot, heraldandnews.com, Reader, Valley Adv-*

*cate, staugustine.com, ssnewstelegram.com, Almanac, New Castle News, shawlocal.com, journal-advocate.com, rrecord.com, helenair.com, southernminn.com, wcfcourier.com, qctimes.com, championnewspapers.com, Maryville Daily Forum, Hutchinson News, globegazette.com, Hippo, Dillon Tribune, Mercury, Journal Gazette, telegram.com, Sioux County Index-Reporter, Pawhuska Journal-Capital, Chippewa Herald, madison.com, Rocky Mount Telegram, Malvern Daily Record, Princeton Daily Clarion, thewetumpkaherald.com, tmnews.com, Lodi News-Sentinel, Hastings Tribune, hopenews.com, hannapub.com, nwitimes.com, lompocrecord.com, jg-tc.com, and Columbus Telegram.*

**Detecting AI in quoted speech** We analyze 30,462 articles with available quote-level pre-

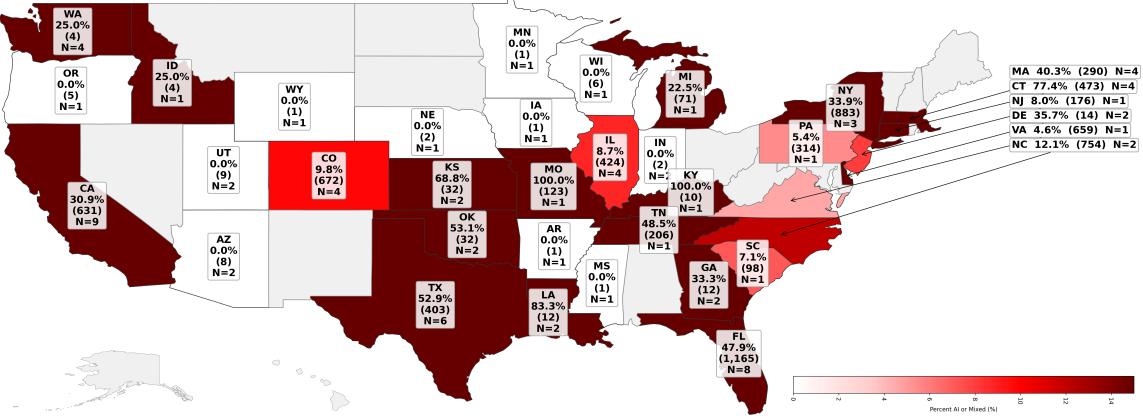


Figure 17: AI use in articles written in languages other than English. The most common language are Spanish, Portuguese, and Vietnamese.

Table 9: Language distribution

Language	% (n)
English	95.16% (177,478)
Spanish	3.88% (7,235)
Portuguese	0.25% (468)
Vietnamese	0.22% (403)
French	0.18% (343)
Polish	0.17% (314)
<b>Other</b>	<b>0.15% (271)</b>

*Other includes:* Russian (163), German (37), Yiddish (27), Indonesian (25), Turkish (10), Dutch (5), Latin (2), Ukrainian (1), Chinese (1). Total: 186,512 articles.

dictions. Each quote is evaluated with an AI-liability classifier, restricted to spans of at least 50 tokens to reduce false positives on very short fragments. We treat quotes labeled as *Unlikely AI* or *Human* as human-written, and all others (Highly Likely AI, AI, Likely AI, Mixed, Possibly AI) as AI-generated. At the article level, we compare the incidence of AI quotes in AI-flagged versus human-flagged articles, yielding  $P(\text{AI quote}|\text{AI article}) = 0.239$  and  $P(\text{AI quote}|\text{human article}) = 0.034$ . Conversely, the probability that an article is AI-generated given the presence of an AI quote is  $P(\text{AI article}|\text{AI quote}) = 0.293$ . In total, 1,376 articles contain at least one AI-generated quote, and 403 articles contain both AI-generated narrative and AI-generated quotes. To test whether length influences detection, we also compare long quotes ( $\geq 120$  words,  $n = 870$ ) to short quotes, finding no significant difference in AI likelihood (two-sample  $t$ -test,  $p = 0.96$ ).

**Effects of republishing articles.** We examine how AI-generated content propagates via redistribution. Using `recent_news`, we cluster articles

by cosine similarity and define *exact duplicates* for scores  $\geq 0.95$  and *semantically similar* for  $0.85 \leq \text{score} < 0.95$ . In total, 16 580 articles meet these criteria, forming 6413 clusters (mean size = 4.16). The *Associated Press* appears most frequently, in 1664 clusters and 4030 redistributed articles, consistent with syndication as the dominant driver of redistribution. Across all duplicates, 6.7% are labeled AI-generated, with a lower rate for exact duplicates (3.1%) and a markedly higher rate for semantically similar duplicates (14.3%). Figure 18 summarize the resulting cluster-size distribution; Table 10 lists the top content providers present in duplicate coverage.

Rank	Author	Count
1	Associated Press	4,011
2	Unknown	1,204
3	Staff Reports	701
4	Advance Local Weather Alerts	404
5	USA Today Network	264
6	Myedmondnews	104
7	Teresa Wippel	101
8	WP Block Co-Authors	98
9	Cascade PBS Staff	82
10	Grace Gilson	81

Table 10: Top 10 authors by frequency of appearances in duplicate articles.

## C.2 opinions

**Overall AI usage in opinions.** *opinions* has 99% **HUMAN-WRITTEN** articles, with a total of 1% having AI Use. 0.11% is detected as **AI-GENERATED** and 0.85% is **MIXED** as shown in Figure 19. The distribution of AI likelihoods per each of the three labels is shown in Figure 20.

Outlet	Opinions (AI+mixed)	recent_news (AI+mixed)	Ratio
WSJ	4.99%	0.74%	6.8×
WaPo	5.51%	0.55%	10.1×
NYT	2.94%	1.80%	1.6×
<b>Pooled</b>	<b>4.56%</b>	<b>0.71%</b>	<b>6.4×</b>

Table 11: Opinion vs. recent\_news AI rates, 2025-06-01–2025-09-15.

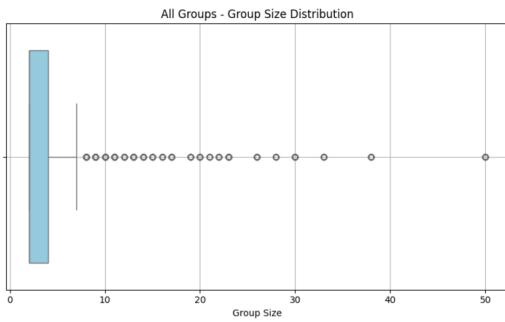


Figure 18: Distribution of duplicate-cluster sizes in recent\_news. Most clusters are small, with a minority of large clusters driving redistribution volume.

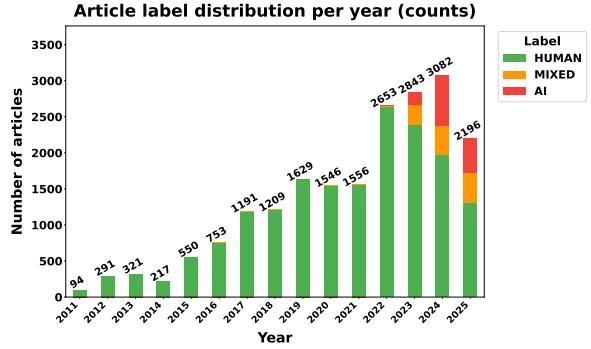


Figure 21: Distribution of AI use predictions in ai\_reporters by year.

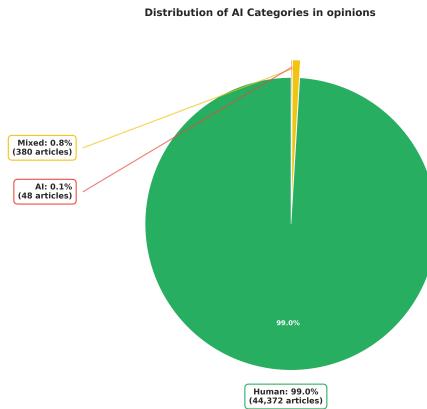


Figure 19: Distribution of AI Use predictions in opinions.

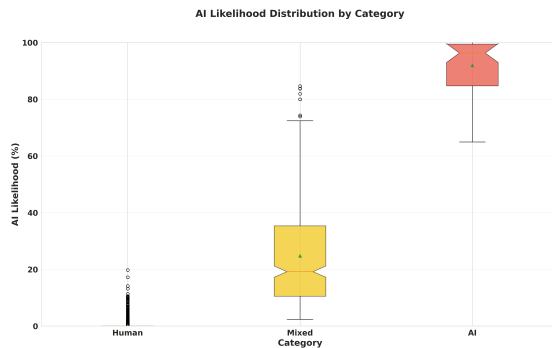


Figure 20: Distribution of AI Likelihoods per each AI Use category in opinions.

### C.3 ai\_reporters

In section §5, we talk about the aggregated trends for the 10 reporters identified as using AI in our data set, whose data we analyzed longitudinally. Here we present more details about the reporters, label distribution, and patterns observed in individual reporters.

**Reporter Profile.** Figure 8 shows reporter statistics. We have anonymized the data, as we want to show only the diversity of expertise the reporters in ai\_reporters have rather than highlight specific reporters. Nine out of ten reporters in this data had at least 10 years of experience.

**Label distribution in ai\_reporters.** ai\_reporters has 86.6% **HUMAN-WRITTEN** articles, with a total of 13.3% having AI Use. 10.7% is detected as **AI-GENERATED** and 2.6% is **MIXED** as shown in Figure 22. The distribution of AI likelihoods per each of the three labels is shown in Figure 23. More importantly, all **AI-GENERATED** labels and almost all **MIXED** are concentrated in the last three years (i.e., 2023–2025; see Figure 21)

**AI use by reporter.** We report AI use by reporter in Figure 24 and Figure 25. We note a limitation in our data collection: reporters often write for multiple outlets, and accessing historical articles from some of these sources is difficult. Consequently,

REPORTER	YEARS ACTIVE	AI USE IN 2025 (%)	TOPIC COVERAGE
1	25+ years	90.1% <sub>519/576</sub>	National politics, civil rights, racial justice, Black affairs
2	20+ years	84.6% <sub>11/13</sub>	Regional news, agriculture, water policy, environment
3	10+ years	78.3% <sub>90/115</sub>	Caribbean-American news, culture, health, diaspora
4	40+ years	72.7% <sub>8/11</sub>	Opinion on policy, education, creativity, technology
5	20+ years	38.1% <sub>48/126</sub>	Local news, public safety, city government, environment
6	30+ years	30.4% <sub>157/517</sub>	Environmental justice, racial equity, misinformation (opinion)
7	50+ years	11.7% <sub>19/162</sub>	Hyper-local news, history, community affairs
8	10+ years	6.9% <sub>27/393</sub>	LGBTQ+ news, politics, legal issues, culture
9	<5 years	3.3% <sub>5/153</sub>	Business, Black entrepreneurship, economic development
10	~10 years	2.3% <sub>3/130</sub>	Local sports, high school athletics, youth leagues

Table 12: Reporter Profiles: Years active, aggregate AI use in 2025 ( $\%_{ai\_flag/total}$ ), and topic coverage. Reporters are arranged from most to least prolific AI user.

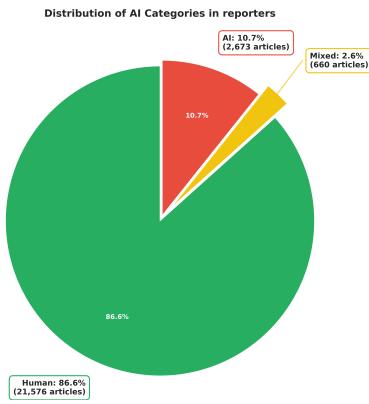


Figure 22: Distribution of AI Use predictions in ai\_reporters.

we could not retrieve all possible articles for every reporter. We did, however, ensure we gathered most of their recent articles and as many as possible from before November 2022 (the ChatGPT release date).

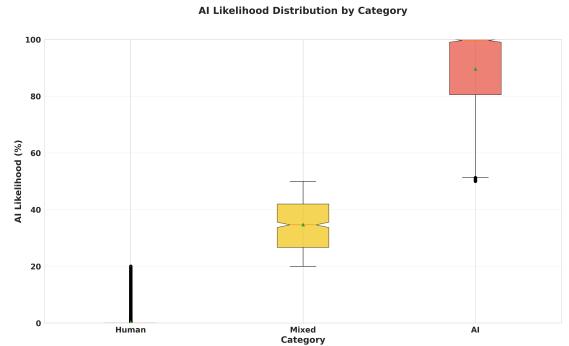


Figure 23: Distribution of AI Likelihoods per each AI Use category in ai\_reporters.

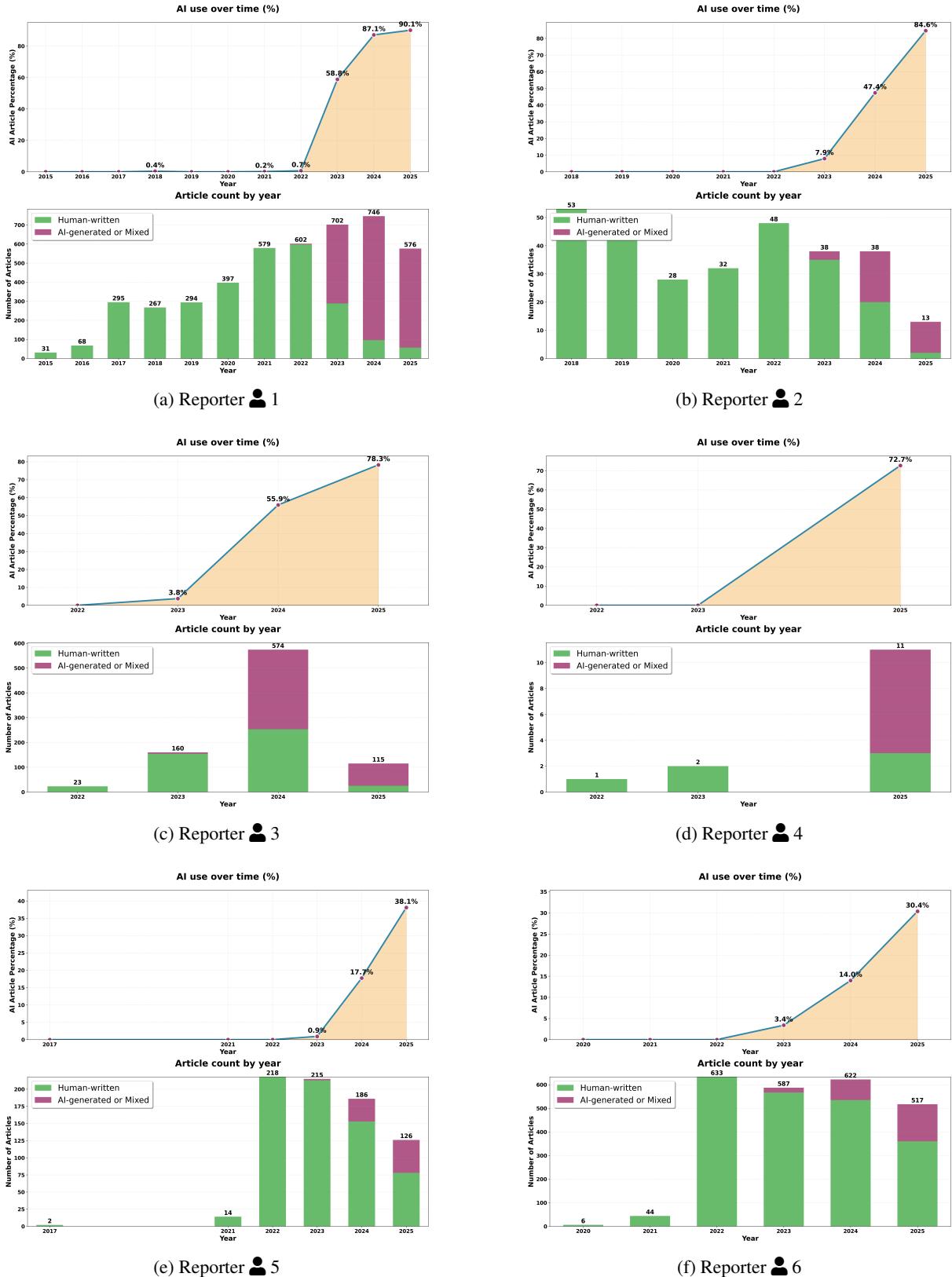


Figure 24: AI content patterns in 2025 by reporters (part 1). See Table 12 for profile alignment.

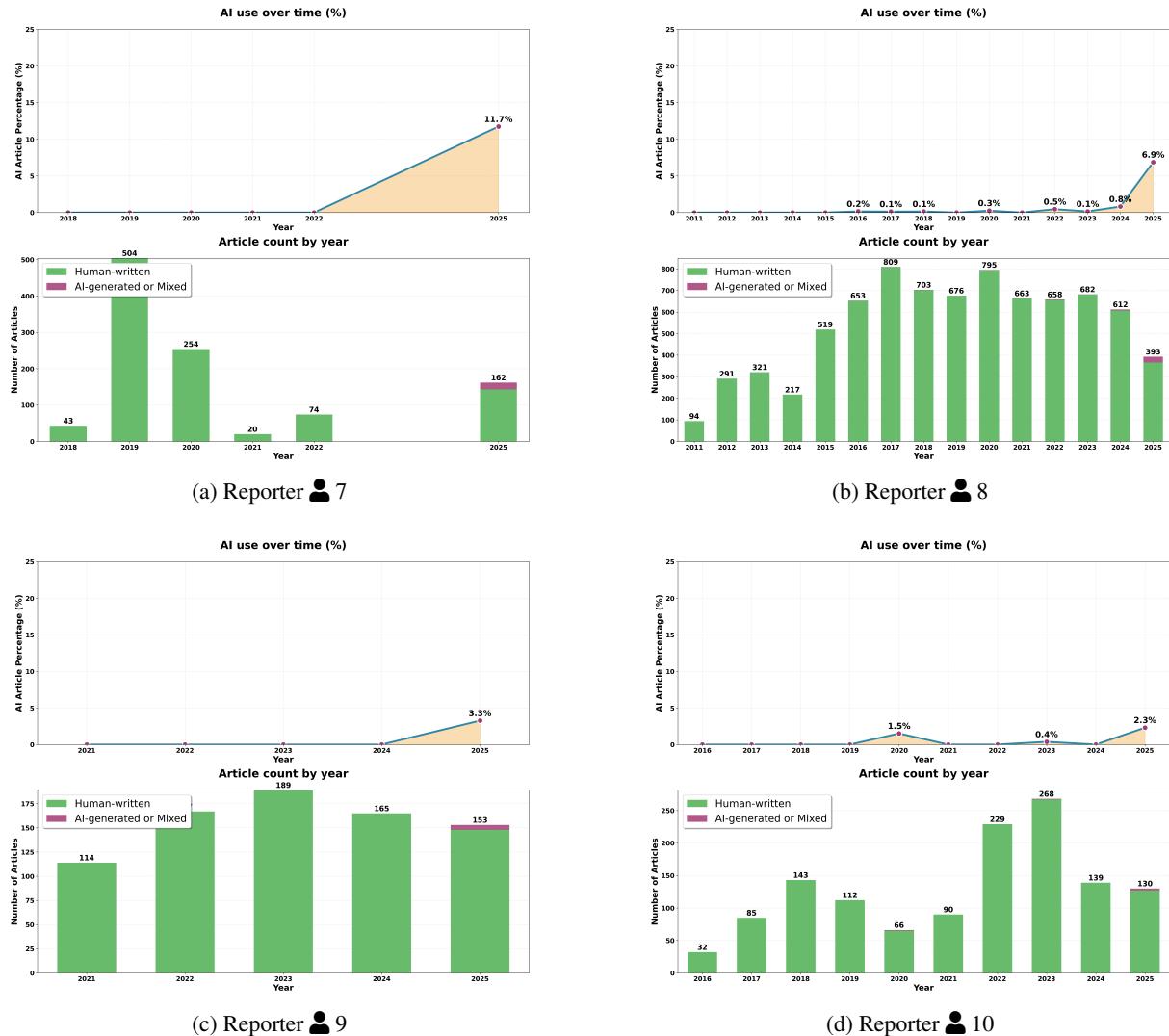


Figure 25: AI content patterns in 2025 by reporters (part 2). See Table 12 for profile alignment.