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Mapping AI uses and perceptions in fact-checking organisations in Mediterranean Europe

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Abstract. This study maps the uses and perceptions of AI among fact-checking organisations accredited by Duke Reporters' Lab, the International Fact-Checking Network, and the European Digital Media Observatory in France, Italy, Spain, Portugal, and Greece. These countries were selected as they are among the most populous territories in the Mediterranean European region and host the majority of fact-checking entities. A qualitative approach is used based on 20 semi-structured in-depth interviews with representatives from each organisation. The interviews were conducted between May and July 2024. The findings reveal that AI tools are primarily employed during the gathering, monitoring, and detection phase, where they help increase speed and expand the scope of disinformation tracking. There is also a growing use of Large Language Models (LLMs) as tools for compiling information and conducting preliminary searches. Generally, organisations interviewed report feeling adequately prepared to use AI, largely due to the accessibility and intuitive design of current tools. Nevertheless, factors such as lack of funding and job precarity, as well as staff composition, affect their implementation, with only seven organisations (36.8%) having developed proprietary tools. Although AI is viewed as a valuable resource for automating repetitive tasks such as transcription, translation, and monitoring, it also raises concerns. Organisations warn that AI could contribute to more sophisticated disinformation and even foster a Liar's Dividend effect, undermining public trust and the credibility of fact-checkers themselves.
Keywords. Fact-Checking, automated fact-checking, artificial intelligence, generative artificial intelligence, journalism.

ES Mapeando los usos y percepciones de la IA en las organizaciones de fact-checking de la Europa Mediterránea

Resumen. Este estudio mapea los usos y percepciones de la inteligencia artificial (IA) entre las organizaciones de verificación acreditadas por el Duke Reporters' Lab, la International Fact-Checking Network y el European Digital Media Observatory en Francia, Italia, España, Portugal y Grecia. Estos países fueron seleccionados por ser algunos de los territorios más poblados de la Europa Mediterránea y albergar la mayoría de entidades de *fact-checking*. Se emplea un enfoque cualitativo basado en 20 entrevistas en profundidad semi-estructuradas con representantes de cada organización. Las entrevistas se realizaron entre mayo y julio de 2024. Los hallazgos revelan que las herramientas de IA se utilizan principalmente en la fase de recopilación, monitoreo y detección, donde ayudan a incrementar la velocidad y el alcance en el rastreo de desinformación. También se observa un uso creciente de Modelos de Lenguaje de Gran Tamaño (LLMs) como herramientas para compilar información y realizar búsquedas preliminares. En general, las organizaciones entrevistadas manifiestan sentirse adecuadamente preparadas para utilizar la IA, en gran medida debido a la accesibilidad y al diseño intuitivo de las herramientas. No obstante, factores como la falta de financiación, la precariedad laboral y la composición de la plantilla afectan su implementación. Solo siete (36,8%) son las organizaciones que han desarrollado herramientas propias. Aunque la IA se percibe como un recurso valioso para automatizar tareas repetitivas como la transcripción, la traducción y el monitoreo, también genera preocupaciones. Las organizaciones advierten que la IA podría contribuir a una desinformación más sofisticada e incluso fomentar un efecto Liar's Dividend, debilitando la confianza pública y la credibilidad de los propios verificadores.
Palabras clave. Verificación, *fact-checking* automatizado, inteligencia artificial, inteligencia artificial generativa, periodismo.

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1. Introduction

Disinformation identification has emerged as a pressing issue in contemporary society, particularly over the last decade, during which the so-called disinformation crisis began (Cavaliere, 2021). In this context, fact-checking initiatives have proven effective in curbing online disinformation (Hameleers & van der Meer, 2020). To counter disinformation, several fact-checking organisations have incorporated Artificial Intelligence (AI) into their practices (Beckett & Yaseen, 2023), including bots for debunking (Flores Vivar, 2020) and machine learning (ML) systems to streamline workflows such as claim detection and evidence retrieval (Guo *et al.*, 2022). AI thus responds both to the rapid circulation of falsehoods online (Vosoughi *et al.*, 2018) and to their increasing sophistication, enhancing detection speed and response capacity.

Recent studies have examined AI use in fact-checking from a journalistic perspective. Dierickx *et al.* (2024), for instance, focused on the Nordic countries. However, no studies have been identified that specifically analyse the uses and perceptions of AI among fact-checking organisations across Mediterranean Europe as a whole, as existing research has focused so far only on individual countries such as Spain and Portugal (Cuartielles *et al.*, 2024, 2023; Gonçalves *et al.*, 2024).

Mediterranean European countries share common features in fact-checking and journalism. Fact-checking is often conceptualised as an alternative rather than a complement to conventional journalism (Moreno-Gil *et al.*, 2022), and the dominant organisational structure follows the "NGO model" (Graves & Cherubini, 2016). Low trust in news persists (Newman *et al.*, 2025), reinforcing the need for initiatives that strengthen informational reliability. These media systems also can be aligned with Hallin and Mancini's (2004) Polarised Pluralist Model, characterised by political parallelism and a strong state role that persist despite digitalisation (Papathanassopoulos *et al.*, 2023).

This study addresses this gap by mapping the uses and perceptions of AI within fact-checking organisations in France, Italy, Spain, Portugal, and Greece—among the region's most populous countries (Eurostat, 2025) and hosts of most fact-checking entities (Duke Reporters' Lab, 2025). Accordingly, the study is guided by the following research questions:

> RQ1. What are the uses of AI by Mediterranean European fact-checking organisations, and what motivates their deployment?
> RQ2. What level of competence and training do these organisations perceive themselves to have regarding AI usage?
> RQ3. Which opportunities and challenges do fact-checking agencies in Mediterranean Europe perceive in AI use?

1.1. Fact-checking and AI

Fact-checking may be defined as the journalistic practice of publishing evidence-based analyses to assess the validity of public claims or content (Dierickx & Lindén, 2023). It is a time-intensive and cognitively demanding activity, requiring the verification of multiple sources under constrained timeframes (Guo *et al.*, 2022), and it also relies on technological tools to evaluate diverse content formats, constituting a socio-technical practice (Westlund *et al.*, 2022). As a result, fact-checking is often more labour-intensive than conventional journalism (Hassan *et al.*, 2015), prompting a growing interest in automating certain production processes to improve efficiency and effectiveness (Wolfe & Mitra, 2024).

The application of AI in fact-checking is often described as "Automated Fact-Checking" (AFC) (Thorne & Vlachos, 2018). However, fully automated systems remain a "Holy Grail" rather than a practical reality (Hassan *et al.*, 2015), as verification continues to require human oversight (Graves, 2018; Kavtaradze, 2024). Accordingly, scholars increasingly conceptualise the practice as "Assisted Fact-Checking" (Nakov *et al.*, 2021), based on a "human-in-the-loop" model (La Barbera *et al.*, 2022).

There is no consensus on the scope of AFC. While Graves (2018) identifies claim detection, verification, and correction as its core components, other scholars propose more granular task-based approaches, focusing on specific stages such as claim identification, evidence retrieval, or automated explanation (Kavtaradze, 2024). As a result, alternative terms such as AI-supported tools or AI-based solutions are frequently used.

Advances in fact-checking technologies have accelerated over the past decade. Early adopters such as Full Fact implemented automated methods as early as 2013 and developed dedicated AI tools from 2016 onwards (Graves, 2018; Smalley, 2022). Other systems, such as ClaimBuster, developed by the University of Texas, employ ML, NLP, and database querying, and was first deployed during the 2016 U.S. presidential debates (Hassan *et al.*, 2017).

The COVID-19 pandemic further accelerated AI adoption in fact-checking. In Mediterranean Europe, organisations such as Newtral, Maldita.es, and EFE Verifica expanded automated monitoring systems and chatbot-based verification workflows, particularly through platforms such as WhatsApp (Cuartielles & Carral, 2025). The emergence of generative AI (GenAI) has introduced additional innovations, including experimental uses of tools such as ChatGPT (Wolfe & Mitra, 2024) and the development of bespoke applications, such as Newtral's ProgramIA during the 2023 Spanish general elections (Cuartielles & Carral, 2025).

Previous mapping studies show that AI tools are most frequently employed during the claim detection phase, involving NLP and ML systems that support disinformation monitoring. In the verification stage, resources such as the InVID plugin, reverse image search engines, and geolocation applications are widely used (Lindén *et al.*, 2022; Westlund *et al.*, 2022), as well as transcription and translation software (Gutiérrez-Caneda & Vázquez-Herrero, 2024). In the distribution phase, chatbots support both dissemination and claim matching, comparing user submissions with previously verified content, often through collaborations with external technology partners (Cuartielles *et al.*, 2024).

GenAI has also intensified training demands. Studies indicate that certain fact-checkers use AI tools without fully understanding their algorithmic foundations (de Haan *et al.*, 2022; Dierickx & Lindén, 2023). Research in Spain and Portugal highlights a continued need for AI-specific training despite high levels of pro-

fessional education (Cantón-Correa *et al.*, 2025), a concern echoed by reports from the Mediterranean Digital Media Observatory (MedDMO, 2025).

Overall, fact-checkers perceive AI as enhancing speed, reach, and monitoring capacity (Cantón-Correa *et al.*, 2025), with benefits including assessing claim check-worthiness, detecting audiovisual manipulation, and enabling multilingual workflows (Dierickx *et al.*, 2024; Gutiérrez-Caneda & Vázquez-Herrero, 2024; Nakov *et al.*, 2021; Wolfe & Mitra, 2024). At the same time, challenges persist, particularly regarding training, output reliability, transparency, and accountability (Dierickx *et al.*, 2024). Some of these concerns are also shared in conventional journalism (Salvador-Mata *et al.*, 2025), a field in which, on the other hand, the potentially liberating role of AI regarding repetitive tasks is also emphasised (Cools & Diakopoulos, 2024; Noain-Sánchez, 2022).

2. Methodology

2.1. Selection fact-checking organisations and interviewees

This study used purposive sampling, selecting fact-checking entities according to the following criteria. Organisations from France, Italy, Spain, Portugal, and Greece were identified through the Duke Reporters' Lab database and included only if they were also listed as active signatories of the International Fact-Checking Network's (IFCN) Code of Principles.

The selection process, conducted in May 2024, resulted in a total of 15 fact-checking agencies. To enhance representativeness, fact-checking initiatives from the aforementioned countries which, as of May 2024, were also part of the European Digital Media Observatory (EDMO) fact-checking community were included. This expanded the final pool to 21 verification entities.

Following this selection, each organisation was contacted via email with an explanation of the study and an invitation to nominate a professional with sufficient expertise to serve as a representative in relation to the research topic. Of the 21 fact-checking organisations initially selected, the Portuguese outlet El Observador and the service Le vrai ou faux from Franceinfo were ultimately excluded from the sample due to non-response. Consequently, the final sample comprised 19 fact-checking entities (Table 1).

Table 1: Characteristics of the fact-checking organisations participating in the study.

Country	Organisation	Website	Creation	Fact-checking Staff	Engineers developing fact-checking tools
France	Science Feedback	https://science.feedback.org/	2015	8	3
	AFP Fact Check	https://factcheck.afp.com/	2017	11[1]	4
	20 Minutes Fake Off	https://www.20minutes.fr/societe/desintox	2017	4	-
	Les Surligneurs	https://lessurligneurs.eu/	2017	6	-
Italy	Pagella Politica	https://pagellapolitica.it/	2012	5	-
	Open.online	https://www.open.online/c/fact-checking/	2018	2	-
	Facta	https://www.facta.news/	2020	7	-
Spain	Newtral	https://www.newtral.es/	2018	11	4
	Maldita.es	https://maldita.es/	2018	24	4
	EFE Verifica	https://verifica.efe.com/	2019	10	-
	Verificat	https://www.verificat.cat/	2019	6	-
	VerificaRTVE	https://www.rtve.es/noticias/verificartve/	2020	7	6
	Infoveritas	https://info-veritas.com/	2021	4	1
Portugal	Público Prova dos Factos	https://www.publico.pt/prova-dos-factos	2016	3	-
	Polígrafo	https://poligrafo.sapo.pt/	2018	8	-

1 In line with the focus of the study, employees of AFP Fact-Check at its headquarters in France and its branches in Spain and Greece are included.

Country	Organisation	Website	Creation	Fact-checking Staff	Engineers developing fact-checking tools
Greece	Ellinika Hoaxes	https://www.ellinikahoaxes.gr/	2013	10	-
	Check4Facts	https://check4facts.gr/	2019	4	2
	FactReview	https://factreview.gr/	2022	4	2
	Greece Fact Check	https://www.factchecker.gr/	2023	5	2

Source: Author's elaboration based on data provided by organisations.

Each of the selected fact-checking organisations nominated a professional from their team to participate in the study, except for AFP Fact Check and VerificaRTVE, which each proposed two professionals. The request was accepted given that both represent fact-checking services belonging to major multimedia corporations—RTVE in Spain and AFP in France. Notably, AFP also conducts fact-checking activities in other Mediterranean European countries such as Spain and Greece. Conversely, a single informant was ultimately interviewed on behalf of Pagella Politica and Facta, after it was confirmed upon initial contact that both services operate under the same corporate group, albeit with distinct functions. Thus, the final sample comprised 20 respondents (Table 2). All participants provided informed consent, authorising their involvement in the study and the use of their statements for publication.

Table 2: Representatives interviewed in the study.

Country	Organisation	Representative	Position
France	Science Feedback	Charles Terroille	Science fact-checking writer and analyst
	AFP Fact Check	Julie Charpentrat	Deputy editor in chief for Digital Investigation
		Dennis Teyssou	Editorial manager of AFP Medialab
	20 Minutes Fake Off	Mathilde Cousin	Journalist in charge of 20 Minutes Fake Off
	Les Surligneurs	Lili Pillot	Fact-checking Journalist
Italy	Pagella Politica / Facta	Giovanni Zagni	Director
	Open.online	David Puente	Deputy director with delegated fact-checking competences
Spain	Newtral	Irene Larraz	Innovation and International Projects Coordinator
	Maldita.es	Pablo Hernández	Academic Research Coordinator
	EFE Verifica	Sergio Hernández	Director
	Verificat	Marc Massip	Fact-checking Editor
	VerificaRTVE	Borja Díaz-Merry	Director of VerificaRTVE
		Pere Vila	Director of Technology Strategy at RTVE
	Infoveritas	Guillermo García	Editor-in-chief
Portugal	Público Prova dos Factos	Fernando Costa	Fact-checking Journalist
	Polígrafo	Filipe Pardal	CEO
Greece	Ellinika Hoaxes	Elena Vatala	Fact-checking Journalist
	Check4Facts	Achilleas Karadimitriou	Fact-checking Journalist
	FactReview	Andronikos Koutroumpelis	Director
	Greece Fact Check	Thanos Sitistas	Director

Source: Author's elaboration based on data provided by organisations.

2.2. Interview guide and analysis

In this study, semi-structured in-depth interviews were conducted as a means of facilitating purposeful and focused conversations. As Tracy (2020, p. 156) notes, qualitative interviews are a productive technique in that they "enable the researcher to stumble upon and further explore complex phenomena that may otherwise be hidden or unseen". The interviews, which lasted between 30 and 90 minutes, were conducted between May and July 2024 via Google Meet, due to the geographical diversity of the sample. Interviews were conducted in either English or Spanish, depending on the informant's language proficiency.

The interview guide was developed on the basis of the research questions and was structured around three main sections: the first addressed the uses of AI within the organisation and the motivations for deploying it, the second focused on the perceived level of competence and training in the use of AI across the organisation, and the third explored the perceived opportunities and challenges in relation to AI usage.

All interviews were recorded and subsequently transcribed for analysis. Transcriptions were generated using Trint, a tool that employs AI for automated transcription. Following this step, each transcript was manually reviewed to ensure the reliability and accuracy of the data. The qualitative analysis software ATLAS.ti was used for the coding process, and the constant comparative method was applied (Wimmer & Dominick, 2013). The data were organised into categories, and after an initial analysis, these categories were refined—along with the relationships and themes identified—with the aim of pinpointing the most recurrent topics. The main categories used in the coding were: uses of AI, motivations, tools used and implementation phases, training received, level of competence in the use of AI, perceived advantages of AI use and detected disadvantages.

3. Results

This section addresses the three research questions, examining AI use and motivations, organisational AI competence and training, and perceived opportunities and challenges.

3.1. Uses of AI and motivations

According to the interview findings, the use of AI tools by fact-checking organisations in Mediterranean Europe dates back to the development of the InVID plugin by the French agency AFP in 2017, representing the earliest identified application of this technology in the region's fact-checking landscape. As Dennis Teyssou (AFP Fact Check) explains:

> One of the tools included in InVID from the outset—the keyframe extractor, which captures frames from each video—runs on a CNN, a convolutional neural network, which is an artificial intelligence model. But at the time, AI was not commonly discussed, and people were unaware of its presence.

As stated by Teyssou, further AI tools have been incorporated as the InVID project has evolved and awareness of the technology has grown—first in 2018 under the name InVID WeVerify, with resources such as Forensic for detecting image manipulation and Optical Character Recognition (OCR), and later from 2021 with Vera.ai, which introduced more advanced capabilities such as deepfake and synthetic audio detectors.

The Spanish organisation Newtral also stands out as a pioneer in AI implementation in the Mediterranean Europe fact-checking context. Since 2018, it has publicly developed AI tools for the monitoring and transcription of political speeches. In 2020, the Greek entity Check4Facts developed its own machine learning tool to review fact-checks and perform a "double check". That same year, Maldita.es in Spain automated its WhatsApp-based user query service using AI, in response to the COVID-19 pandemic. Further use cases were identified from 2021 onwards, especially from 2022, coinciding with the release of GenAI tools such as ChatGPT-3.5.

All fact-checking organisations in Mediterranean Europe reported using, or having used, AI tools to varying extents within their workflows. Table 3 summarises the main AI tools each organisation reported using across different operational phases. While workflows and processes may differ by organisational structure, interviews revealed three broadly shared phases: a first phase of gathering, monitoring, and detecting disinformation (often viewed as interlinked tasks), a second phase focused on the production of verification content, and a third phase concerned with its distribution.

According to the data, AI tools are most commonly used during the gathering, monitoring, and detection phase. Common tools include the InVID plugin; reverse image search engines such as Google Lens and Yandex; facial recognition tools like PimEyes; and resources such as Hive and Hugging Face, used to detect AI-generated synthetic content. Notable applications also include geolocation tools such as Picarta, used by Ellinika Hoaxes, and ChatGPT-4, deployed by organisations like Science Feedback, which reported using a customised pipeline to identify scientific disinformation.

Some organisations, such as Infoveritas and Newtral, have developed proprietary monitoring systems based on NLP. Newtral uses two tools: ClaimHunter, which identifies factual claims made by political actors on the X platform, and Editor, which processes audiovisual and printed speeches. Both tools forward potentially verifiable claims to the team, which then assesses whether a more detailed investigation is warranted. Newtral also employs ClaimCheck, an AI model trained using ML to detect repeated claims via semantic similarity.

Claim matching also features in chatbot tools used by Newtral, Maldita.es, EFE Verifica and AFP Fact Check, which operate on platforms like WhatsApp. These bots identify disinformation based on user queries and match them to existing fact-checks, enabling quicker responses. Maldita.es has further enhanced its WhatsApp chatbot with a classification feature that groups similar queries, helping to uncover underlying disinformation narratives within public discourse.

Other fact-checking initiatives, such as Polígrafo and EFE Verifica, employ tools like NewsWhip and Meltwater to monitor viral content and disinformation

online. Technology platforms such as Meta also provide monitoring tools, including FacebookQ and CrowdTangle, which are used by AFP Fact Check. Ellinika Hoaxes highlights the use of Ground News and AllSides, which they describe as "AI-powered tools that detect ideological bias in journalistic texts", aiding them in understanding narrative framing, anticipating fake news, and engaging in prebunking.

Similarly, Large Language Models (LLMs) such as ChatGPT, Claude Opus, and Gemini are used in this initial phase to compile preliminary information prior to verification. As Andronikos Koutroumpelis notes, at FactReview these tools are used in a diversified and combined manner, as "it is better than relying on a single model". He explains that ChatGPT-4 is used for summarising short texts, Claude Opus for longer documents and merging content, and Gemini Pro 1.5 for even lengthier texts or retrieving scientific literature: "They act as backstage assistants that help us contextualise before starting the verification process".

Several organisations—such as Les Surligneurs, Pagella Politica, Facta, and Ellinika Hoaxes—situate the use of LLMs in the production phase, employing them to summarise or compile contextual information, which they describe as helpful in "scaffolding the fact-check". In some cases, these tools are used for expert source identification, although such usage is often "occasional and not institutionalised", as noted by Les Surligneurs.

In the production phase, LLMs also serve functions related to translation, revision, and editing. Fernando Costa (Público Prova dos Factos) observes: "Sometimes we have headlines or texts that are too long, and we ask ChatGPT, Gemini, or Copilot to shorten them". The production phase represents the second most significant area of AI application. Common tools include translation services such as DeepL and Google Translate, and transcription tools like Whisper, Good Tape, oTranscribe, and Trint.

Moreover, there are entities which employ bespoke transcription solutions—AFP Fact Check uses AFP Scribe, while others use externally developed tools such as El Desgrabador (created by the Argentine outlet Chequeado and used by Verificat) and Escriba (developed by the Brasilian fact-checking organisation Aos Fatos and used by Polígrafo). Additionally, tools such as Wiseone are employed by Ellinika Hoaxes to locate specific terminology. Check-4Facts uses a ML tool to perform a "complementary check". As Achilleas Karadimitriou (Check4Facts) explains:

> When we have completed the conventional verification process, we use a machine learning tool that analyses the text and checks the sources. [...] It's a kind of double-check and a valuable information provider, because it sometimes offers additional sources that we hadn't considered.

The distribution phase is the phase where AI tools are least frequently used. Nonetheless, organisations such as Maldita.es, EFE Verifica, Newtral and AFP Fact Check operate chatbots that match user queries with previously published fact-checks—tools which also assist in disinformation monitoring, as discussed above. Open.online uses LLMs for search engine optimisation (SEO), such as keyword suggestions, while Polígrafo employs Echobox, described as "an algorithm that increases engagement and online traffic". It also uses ClaimReview, which helps improve the visibility of fact-checks on Google.

Table 3: Main AI-based tools by organisation and work phase.

Country	Organisation	Gathering, monitoring and detection	Production	Distribution
France	Science Feedback	ChatGPT-4 Pipeline (disinformation monitoring)	ChatGPT-4, DeepL (translation and transcription)	
	AFP Fact Check	FacebookQ, NewsWhip, Crowdtangle (social media analysis and trend); InVID (visual and audio detection); WhatsApp chatbot (disinformation monitoring)	AFP Scribe (transcription); DeepL, Google Translate (translation)	WhatsApp chatbot (fact-checks distribution)
	20 Minutes Fake Off	InVID, Google Lens, Yandex (visual detection)	HappyScribe (transcription)	
	Les Surligneurs	Google Lens (visual detection); Statcheck (statistics verification)	ChatGPT (information search, summarisation)	
Italy	Pagella Politica / Facta		ChatGPT (summarisation)	
	Open.online		ChatGPT-4 (text revision)	Gemini (SEO)

Country	Organisation	Gathering, monitoring and detection	Production	Distribution
Spain	Newtral	ClaimHunter, Editor, ClaimCheck (disinfomation monitoring); InVID, Google Lens (visual detection); Hive, Hugging Face (AI-generated content detection); WhatsApp chatbot (disinformation monitoring)		WhatsApp chatbot (fact-checks distribution)
	Maldita.es	Own WhatsApp chatbot (disinformation monitoring and narratives detection); InVID, Yandex, Google Lens (visual detection)		Own WhatsApp chatbot (fact-checks distribution)
	EFE Verifica	Meltwater (social media analysis and trend); IVERES Project tools (visual detection); WhatsApp chatbot (disinformation monitoring)		WhatsApp chatbot (fact-checks distribution)
	Verificat	Google Lens (visual detection)	Desgrabador (transcription); Google Translate, ChatGPT (translation)	
	VerificaRTVE	IVERES Project tools (social media monitoring, visual and audio detection); VirusTotal (phishing detection); Hive (AI-generated content detection); PimEyes (facial recognition); Yandex, Google Lens (visual detection)	IVERES Project tools (transcription and translation); Trint (transcription)	
	Infoveritas	Own NLP System (social media monitoring); Hive, Hugging Face (AI-generated content detection)		
Portugal	Público Prova dos Factos	Search By Image, Google Lens, TinEye, InVID (visual detection)	DeepL (translation); Good Tape, oTranscribe, Copilot (transcription)	
	Polígrafo	NewsWhip (social media analysis and trend)	Escriba (transcription); ChatGPT (translation)	Echobox, ClaimReview (traffic and engagement boosting)
Greece	Ellinika Hoaxes	Ground News, AllSides (bias detection); ChatGPT (information search); Picarta (geolocalisation); Image Analysis Toolset, InVID (visual detection)	Wiseone (terminology search); ChatGPT (information search, text summarisation and revision)	
	Check4Facts	Google Lens, InVID (visual detection); Hive (AI-generated content detection)	ML tool (source revision)	
	FactReview	ChatGPT, Claude Opus, Gemini (information search and text summarisation); InVID (visual detection)	Whisper v3 (transcription)	
	Greece Fact Check	ChatGPT, Gemini, Aria (information search); Hive (AI-generated content detection)	ChatGPT (translation)	

Source: Author's elaboration based on data provided by organisations.

It is also worth noting that, as observed, each organisation integrates AI tools at different stages of the fact-checking process, depending on its internal structure and operational practices. For instance, organisations such as Newtral and VerificaRTVE clarify that their use of AI tools is limited to the gathering and monitoring phases, emphasising that the detection of disinformation occurs later and remains the exclusive responsibility of professional fact-checkers. Similarly, certain tools—by virtue of their design—

can be applied across multiple stages of the fact-checking workflow. A case in point is IVERES, a toolbox for detection, archiving, and automatic transcription developed by RTVE in collaboration with several Spanish universities.

It is also important to note that, although each organisation was asked to identify the AI tools most used, some entities—such as Ellinika Hoaxes and Les Surligneurs—highlighted a heterogeneous and non-institutionalised use, whereby individual fact-checkers engage in a trial-and-error approach based on personal experimentation. In this context, only seven organisations in the sample stand out for having implemented proprietary AI tools. These include: VerificaRTVE (IVERES); AFP Fact Check (InVID); Newtral (ClaimHunter, Editor, ClaimCheck); Check4Facts (ML tool); Maldita.es (chatbot); Science Feedback (ChatGPT-4 pipeline); and Infoveritas (NLP system). Nevertheless, other organisations—such as EFE Verifica and Polígrafo—reported that they are in the process of developing proprietary monitoring tools. Meanwhile, FactReview noted that it had attempted to create a chatbot for detection and dissemination, but the project was suspended due to a lack of funding.

The primary motivations for using AI also vary according to the organisation and the tools employed. Entities such as Greece Fact Check and FactReview stated that their main objective is to "obtain preliminary and contextual information", particularly through the use of LLMs prior to initiating a verification. In contrast, services such as 20 Minutes Fake Off, Público Prova dos Factos, and AFP Fact Check identify "saving time on routine tasks" as the most common motivation, particularly in workflows that are frequently under time pressure.

Beyond time-saving, several fact-checking agencies highlighted improved accuracy as a key advantage in specific aspects of their work—for example, identifying manipulated images through reverse image search tools (Público Prova dos Factos), linguistic editing of texts (Open.online), and conducting a "double check" of sources (Check4Facts). Additionally, some organisations pointed to increased reach as a central motivation in countering disinformation. This is facilitated through online monitoring tools (Newtral, Science Feedback, Infoveritas), distribution chatbots that enable quicker detection and response to false information (Maldita.es, EFE Verifica, Newtral, AFP Fact Check), and automatic translation tools that help in understanding disinformation circulated in multiple languages (VerificaRTVE). As Felipe Pardal from Polígrafo puts it: "The use of AI in our work must allow the fact-checkers to do what they do best—fact-checking, investigating, having more time to write, to call people, and not be so concerned with tasks that AI can handle".

3.2. Perceived level of competence and training in AI use

Fact-checking agencies in Mediterranean Europe generally perceive themselves as being prepared to use AI in fact-checking and open to deploying it. They attribute this perception to the intuitive use they make of most AI tools, which are described as having user-friendly interfaces that do not require expert-level proficiency. In this regard, most organisations have received some training related to the AI use. However, notable disparities emerge among the sampled entities. For instance, agencies such as Polígrafo and Check4Facts have received training from the same companies or institutions that developed the AI tools they currently use, such as Echobox and Aos Fatos in the case of Polígrafo, and the Athena Research Centre in the case of Check4Facts, which helped them develop the ML tool.

Others, such as Open.online and Verificat, have independently enrolled in courses and training programmes. Meanwhile, entities like VerificaRTVE, EFE Verifica, Maldita.es, Les Surligneurs, and Science Feedback have participated in sessions offered by organisations such as the International Fact-Checking Network (IFCN), the European Fact-Checking Standards Network (EFCSN), the European Broadcasting Union (EBU), and the European Digital Media Observatory (EDMO).

However, Science Feedback cautions that many of these training sessions primarily focus on how AI can be exploited by disinformation actors, rather than on the "positive uses" of AI for fact-checkers themselves. In line with this, most fact-checking organisations reported not having received ethical guidelines for AI use from bodies such as the IFCN or EFCSN. As a result, some entities—such as 20 Minutes Fake Off, Polígrafo, Pagella Politica and Facta—do not rule out the possibility of developing their own internal guidance in this area.

Entities such as Polígrafo and EFE Verifica acknowledge the existence of an "ongoing internal debate" within the fact-checking community and express confidence that it is only "a matter of time" before such guidelines are available. However, some fact-checkers argue that receiving ethical guidance is not currently a "priority". As Irene Larraz (Newtral) points out: "I believe that what we currently lack is time and resources to scale and accelerate our use of this technology". Indeed, entities such as Newtral, AFP Fact Check, Check4Facts, EFE Verifica, and Science Feedback already have some form of internal guidance on AI use within their platforms or broader media groups, although in most cases, these consist of internal protocols rather than formalised public policies.

Notably, agencies such as Newtral and AFP Fact Check are emerging as providers of AI-related training for other organisations. However, there are several—such as Ellinika Hoaxes, 20 Minutes Fake Off, FactReview, Infoveritas, Pagella Politica and Facta—that reported not having received any specific training, instead learning in a "self-taught manner" by sharing knowledge of the tools used in day-to-day work.

As such, trial-and-error learning appears as a significant method for developing competence in AI usage. In some verification services based within larger media outlets—where teams comprise individuals from diverse departments and areas of expertise—perceptions of competence and training in AI appear to be influenced by factors such as age and professional background. While organisations like AFP Fact Check and Público Prova dos Factos believe their current use of AI reflects a reasonable level of preparedness, they do acknowledge that not all staff

members may possess the same level of familiarity or training. A similar perspective is shared by Infoveritas, whose team reports feeling confident using intuitive detection tools such as Hive and Hugging Face, while expressing uncertainty regarding the internal workings of monitoring tools designed externally by engineers.

In this regard, FactReview and Newtral emphasise the importance of collaboration between journalists and engineers in leveraging AI effectively. Both initiatives have engineers on staff (see Table 1) and believe this has enhanced their understanding of how AI works and how it can be meaningfully integrated into fact-checking practices. Indeed, team composition and employment stability emerge as key factors in shaping perceptions of competence and training. For example, Verificat reported that staff turnover in recent years has hindered the development of greater expertise in AI. They also cited a prior scepticism towards AI in the verification domain—something they now view as largely overcome, particularly after learning from the experiences of other organisations. As Marc Massip (Verificat) states: "We attended GlobalFact and saw successful AI use cases, which encouraged us to begin experimenting more".

Beyond tool type and professional profile, some organisations believe their perception of AI competence is shaped by the current state of AI development and the challenges it poses in relation to the sophistication of AI-generated disinformation. According to Mathilde Cousin (20 Minutes Fake Off), "Right now, we feel prepared because the level of sophistication in AI-generated disinformation is still manageable, but we don't know what the future holds. It's a work in progress". A similar view is expressed by Sergio Hernández (EFE Verifica), though he conveys confidence in the "high learning capacity" of fact-checkers to address "new challenges".

3.3. Perceived opportunities and challenges in AI usage

Participating organisations generally perceive AI as a valuable technology for streamlining aspects of their work, particularly in disinformation monitoring, transcription, and automatic translation. Newtral, for example, reports that integrating AI into their monitoring processes has significantly increased efficiency and reach, reducing the time spent detecting factual claims "by approximately 72%".

VerificaRTVE underscores the role of AI in facilitating the analysis of disinformation in foreign languages, particularly through translation tools. In a similar vein, Check4Facts and Ellinika Hoaxes emphasise the usefulness of AI in gathering and structuring background information to support the fact-checking process. As Achilleas Karadimitriou of Check4Facts explains, "AI provides ready-made knowledge easily, saving time and offering direction". Likewise, Andronikos Koutroumpelis from FactReview highlights the value of combining diverse AI tools to refine fact-checkers' outputs, observing that, "If you use them correctly, everything is better. You are faster, more accurate. You get a nice factcheck on your own factcheck".

Moreover, Koutroumpelis stresses AI's potential for data journalism, noting that "it can process large datasets and identify patterns", thereby facilitating more in-depth and efficient analysis. A similar perspective is offered by Maldita.es, which points to the advantages of using AI-powered chatbots to detect emerging disinformation narratives. In this regard, Maldita.es and EFE Verifica report that such tools have significantly enhanced their ability to respond to user queries, streamlining their workflow and expanding their reach.

Further applications of AI are noted in the field of visual detection. AFP Fact Check commends advancements in image recognition technologies, particularly tools like Keyframes. Open.online draws attention to AI's role in identifying copied scientific imagery, with David Puente explaining that "there are microscopic images from scientific studies that have been copied from other research to misinform, and the Imagetwin system using AI detects these anomalies". Similarly, Público Prova dos Factos values the utility of AI in verifying older or geographically remote content. As Fernando Costa observes:

> If I need to verify an image that was taken in Australia many years ago, I have no way of physically going there. With reverse search AI tools I can analyse the image, trace it back and it will tell me where it has appeared.

Following this line, organisations such as Infoveritas value the fact that the use of AI can help to "sharpen the aim" in the detection of disinformation. VerificaRTVE identifies a major opportunity in detecting synthetic audio, with Borja Díaz-Merry explaining that "AI can spot patterns missed by human analysts". AFP Fact Check's Dennis Teyssou echoes this, citing "promising results" from AI audio detection tools.

Despite these advantages, all agencies emphasise the fallibility of AI, insisting it should play a complementary role, with human fact-checkers retaining full control. Several report issues such as LLMs hallucinations and false positives in synthetic image detection. Tools like Hive and Hugging Face have proven unreliable for this task, according to Verificat, AFP Fact Check, Público Prova dos Factos, 20 Minutes Fake Off, FactReview, and Maldita.es.

In this regard, Maldita.es also highlights the methodological challenges posed by using AI-based detection tools for fact-checkers' rating scales. These tools typically express the likelihood of AI-generated content in percentages but, as Pablo Hernández (Maldita.es) explains, "We cannot say that something is 80% or 90% false". For this reason, they favour more explanatory and contextual formats that illustrate how AI may have been used in a given piece of disinformation.

The difficulty in accounting for context is another major limitation of AI, as noted by several organisations. Both Público Prova dos Factos and Maldita.es observe that disinformation often hinges on subtle contextual cues, including tone and linguistic nuance—elements AI tools are currently ill-equipped to interpret. Echoing this concern, 20 Minutes Fake Off points out that many AI systems are primarily trained on English-language data, which may reduce their precision in other linguistic and cultural contexts.

Concerns over AI training processes also feature prominently. Polígrafo and Science Feedback, for example, raise ethical and legal questions about the

data used to train these models—particularly in relation to copyright. Charles Terroille of Science Feedback notes:

> One of the things we don't know yet is the question of the use of our fact-checks to train models. It's a major issue for newspapers, but in fact-checking, we're only just beginning to discuss it. It's still a very grey area. This would be a valuable point for further investigation.

Another prominent issue is the potential for GenAI to facilitate more sophisticated forms of disinformation, thereby complicating detection efforts. AFP Fact Check, EFE Verifica, and Open.online caution that generative tools enable the mass replication and variation of content across multiple formats, making it "harder to trace original sources" and compelling fact-checkers to "rely on alternative types of evidence".

Additionally, 20 Minutes Fake Off and FactReview highlight the risk that widespread use of GenAI to produce disinformation could contribute to generalised public scepticism—a situation in which individuals begin to doubt all types of information, believing it may be AI-generated. As Mathilde Cousin (20 Minutes Fake Off) reflects, this scepticism could undermine public trust in fact-checkers themselves. And as Andronikos Koutroumpelis (FactReview) adds, disinformation actors could exploit this climate of mistrust by dismissing incriminating evidence as AI-generated. Along similar lines, Check4Facts and Público Prova dos Factos caution that excessive reliance on AI tools by fact-checkers could undermine the credibility and trustworthiness of their work due to AI's inherent fallibility and could even foster a degree of "professional laziness".

The need for continual upskilling also emerged as a shared challenge. Several organisations—including AFP Fact Check, VerificaRTVE, Les Surligneurs, Greece Fact Check, Science Feedback, and Newtral—stressed that AI requires ongoing training, both to understand its application in the production of disinformation and to operate effective countermeasures. As Dennis Teyssou (AFP Fact Check) explains: "As disinformation becomes more sophisticated through AI, we'll need new tools. The ones we have now are sufficient for the moment, but in the future, we'll need others". Similarly, Borja Díaz-Merry (VerificaRTVE) points to a mismatch between the pace of disinformation and the development of adequate tools: "We often find that disinformation spreads faster than the tools needed to counter it".

While concerns about the increasing complexity of AI-driven disinformation are widespread, respondents consistently agreed that, as of now, no substantial wave of AI-generated falsehoods has been observed. Current instances remain "manageable" and "within reach". Indeed, entities such as Público Prova dos Factos argue that despite the increasing sophistication of disinformation, this challenge may in fact serve to reaffirm the professional role of fact-checkers. As Fernando Costa (Público Prova dos Factos) puts it: "AI tools for disinforming complicate our work, but they also make us more necessary. It's like that difficult equation: if there were no sick people, we wouldn't need doctors".

4. Discussion and conclusions

This study maps the uses of AI by fact-checking organisations in Mediterranean Europe, as well as their motivations for deploying it, their perceived level of competence and training, and the opportunities and challenges they associate with AI.

Regarding RQ1, AI tools are primarily used in the gathering, monitoring, and detection phase, understood as the stage prior to human verification by professional fact-checkers. This phase is characterised by the use of monitoring tools and AI-powered resources such as InVID for image and video identification. These findings align with previous research by Dierickx *et al.* (2024) in the Nordic countries, who noted a high prevalence of such tools, as well as with Westlund *et al.* (2022) and Lindén *et al.* (2022), who observed a concentration of technological tools—particularly NLP and ML—in claim detection, especially on social media monitoring.

This pattern can also be interpreted considering Juneja and Mitra's (2022) findings, which identify social media monitoring as the most resource-intensive task for fact-checkers. This may partially explain the emphasis on AI-based tools in this phase, aimed at increasing speed and reach, which, according to the results, are two of the main motivations driving AI deployment.

In line with Dierickx *et al.* (2024), GenAI tools such as LLMs are seen as effective for streamlining workflows, especially for information retrieval and synthesis—findings that are consistent with Cools and Diakopoulos (2024) in the journalism domain. In fact, this study reveals a more advanced stage of experimentation with GenAI tools like ChatGPT, particularly when compared with the early-stage perceptions among fact-checkers identified by Cuartielles *et al.* (2023). In some cases, organisations report the collaborative use of multiple LLMs, which may reflect the emergence of a "collective intelligence of models" (Zou *et al.*, 2023) and the increasing use of LLMs as search engines.

There is also a noticeable homogenisation in the types of AI tools employed across organisations, a trend that may, as suggested by Dierickx *et al.* (2024), be attributed to the limited time available to fact-checkers for tool exploration due to demanding production routines. Notably, the development of proprietary AI tools tends to occur in organisations that include engineers within their teams. As Wolfe and Mitra (2024) point out, AI integration is often shaped by the organisational model itself.

In relation to RQ2, generally entities perceive themselves as adequately prepared for using AI tools—largely because many of these tools have intuitive interfaces and user-friendly designs. Factors such as age, frequency of technology use, educational background, prior confidence or scepticism about AI, and team composition and stability can all influence perceived competence. It is important to highlight that labour precarity and job instability in fact-checking, as noted by Roberts and Koliska (2025), may also constrain the development, deploying, and perceived skill level regarding AI.

Consistent with Dierickx and Lindén (2023) and de Haan *et al.* (2022), several organisations fail to identify the algorithmic nature of certain tools—for

example, social media monitoring systems used within platforms such as Meta's Third-Party programme. Similarly, other entities operate WhatsApp-based automated channels without recognising them as AI-driven tools, echoing the earlier findings by Cuartielles *et al.* (2024). This reinforces the argument made by Cantón-Correa *et al.* (2025) for expanded training, particularly to enhance understanding of positive and constructive uses of AI in combating disinformation.

Regarding RQ3, the opportunities identified include gains in efficiency and scalability, as well as the delegation of repetitive tasks, allowing fact-checkers to focus on more complex and value-added activities. This is consistent with the conclusions of Cools and Diakopoulos (2024) and Noain-Sánchez (2022) in the field of journalism. AI is also perceived as a useful resource to enhance detection capacities, particularly in areas such as audio analysis and multilingual disinformation decoding.

Notably—following Johnson (2023)—fact-checking professionals do not share the fears observed in studies in relation to AI-induced job displacement in journalism. Instead, they reaffirm their expert role as contextual interpreters and emphasise the importance of maintaining a human-in-the-loop approach (La Barbera *et al.*, 2022). Perceived limitations in AI use include its fallibility and challenges related to model training and copyright (Leiser, 2022), as well as fears that widespread use could refine disinformation and make fact-checkers' jobs more difficult (Cuartielles *et al.*, 2023).

In that sense, concerns around information reliability are particularly prominent. Some professionals argue that AI-driven disinformation could fuel widespread scepticism and ultimately benefit disinformation actors. In line with Chesney and Citron (2019), there is concern about a Liar's Dividend effect, whereby the public assumption that AI can fabricate highly realistic false content leads to a situation in which even true information is discredited—thus enabling disinformation agents to deny incriminating content by labelling it as synthetic.

Although this research covers the majority of accredited fact-checking organisations in France, Italy, Spain, Portugal, and Greece, it is crucial to note that the study is limited to the context of Mediterranean Europe and to a specific period, which is subject to ongoing technological change. It is also worth noting that this research was conducted prior to the discontinuation of tools such as CrowdTangle and ClaimReview, as well as Meta's announcement of the termination of the Third-Party Fact-Checking programme—events whose implications for the future evolution of AI tools applied to fact-checking remain uncertain. Future research should therefore examine these evolving scenarios while also incorporating perspectives from diverse media systems and geographical areas. Nevertheless, this research provides an initial mapping of the uses and perceptions of artificial intelligence among fact-checking organisations in Mediterranean Europe as a whole, thereby contributing to the advancement of knowledge on the adoption of this technology in both the academic and professional spheres of fact-checking.

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6. Statement on the use of artificial intelligence

As specified in the Methodology section of the article, the AI tool Trint was used for the automated transcription of the interviews, which was subsequently reviewed manually.

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