

In the evolving landscape of investment research and family office analytics, artificial intelligence tools like ChatGPT and Google Gemini have become indispensable. They streamline preliminary research, help parse complex reports, and enable efficient summarization — all critical in managing ultra-high-net-worth (UHNW) portfolios. However, as powerful as these tools are, they come with a hidden risk: the <https://canadianfamilyoffices.com/special-reports/technology-sr/ai-has-the-makings-of-a-powerful-tool-for-family-offices-but-frequent-and-highly-convincing-hallucinations-are-proving-troublesome/> phenomenon of AI hallucinations.

Hallucinations refer to instances when generative AI confidently delivers inaccurate or fabricated information, often persuasive enough to mislead even experienced analysts. These errors are especially concerning within family office contexts, where data scarcity — particularly in private markets — can amplify the risk of misleading conclusions.

To mitigate these risks while harnessing AI's productivity gains, it's essential to build a robust but simple AI verification checklist. This checklist ensures AI-derived insights are cross-checked against reliable sources, reviewed internally, and aligned with audit standards, preserving the integrity and trustworthiness of analyst work.

Why Verification Matters: Understanding AI Hallucinations

Before diving into the checklist creation, let's clarify what makes AI hallucinations so risky in finance and family office research:



- **Persuasiveness:** Advanced AI models generate fluent, confident-text resembling human writing. Their output often appears professional and authoritative, which can deceptively mask factual inaccuracies.
- **Factual and Faithfulness Errors:** A key distinction exists between *factual hallucinations* — outright false or fabricated data (e.g., wrong financial figures or nonexistent companies) — and *faithfulness errors* — where summaries or paraphrases distort the meaning of source materials.
- **Data Scarcity & Private Markets:** Family offices frequently deal with private investments where public data is scarce or unavailable. This scarcity gives AI less factual "ground truth," increasing hallucination likelihood and requiring extra diligence.
- **Operational Impact:** Erroneous AI outputs can propagate into reports, due diligence notes, or portfolio summaries, leading to poor investment decisions and reputational risk.

Key Use Cases for AI in Family Office Analyst Work

AI tools like ChatGPT and Google Gemini are often employed for these common family office tasks:

- **Preliminary Research:** Quickly generating an overview on sectors, companies, or investment themes, helping analysts scope deeper research.
- **Parsing Reports:** Extracting and synthesizing key information from long-form documents such as fund quarterly reports, economic outlooks, or manager updates.
- **Summaries:** Producing executive-level summaries from multiple sources to facilitate swift decision making by portfolio managers or principals.

Ask yourself this: each use case benefits from ai's speed but requires particular attention to verification to avoid introducing errors into downstream analysis.

Building a Simple AI Verification Checklist

To operationalize rigorous AI use in analyst workflows, design a verification checklist that is straightforward to implement and scalable as AI adoption grows. Here's a recommended step-by-step checklist for teams:

1. *Identify AI-Generated Content*

- Tag or label any output from ChatGPT, Google Gemini, or similar AI tools within your workflow.
- This ensures transparency internally and aids audit trails.

2. *Source Cross-Check*

- Confirm factual claims, figures, or quotes by comparing against an authoritative, preferably primary, source.
- When AI references statistics or market trends, verify dates, data points, and origins through trusted databases or official documents.
- For private markets data, be especially vigilant—cross-check with direct manager communications, portfolio statements, or industry reports.

3. *Faithfulness Review*

- Ensure AI summaries or paraphrases accurately reflect the tone and content of the original documents.
- Watch out for omitted qualifiers or inserted interpretations that could mislead the reader.

4. *Second Reviewer Sign-Off*

- Introduce a second human reviewer to validate AI-derived content before final use.
- This three-eyes principle mitigates risks of overlooked hallucinations or biased interpretations.

5. *Document Verification Decisions*

- Keep records of verification steps taken, sources used, and review dates.
- This practice helps build confidence and satisfies auditor inquiries on method and governance.

6. *Continuous Feedback Loop*

- Maintain an ongoing log of AI errors or hallucinations encountered.
- Use this to iteratively refine prompt strategies, model selection (e.g., ChatGPT vs Google Gemini), and training for analysts.

Sample AI Verification Checklist Table

Verification Step	Checklist Action	Responsible Party	Documentation Required
Identify AI Output	Label content generated by ChatGPT or Google Gemini clearly	Analyst	AI output log or annotation in report
Cross-Check	Verify all factual data with primary/secondary trusted sources	Analyst	Verification notes, hyperlinks, or scanned sources
Faithfulness Review	Compare summary/paraphrases with original context	Reviewer	Reviewer comments and confirmation
Second Reviewer Sign-Off	Ensure second analyst reviews AI outputs for errors	Senior Analyst or Team Lead	Approval sign-off sheet or email confirmation
Documentation	Document verification steps and findings for audit	Analyst & Reviewer	Verification log or audit trail document
Feedback & Improvement	Log AI hallucinations and update process accordingly	Team Lead	Hallucination report and training updates

Additional Best Practices for Family Office Teams

- **Train Analysts on AI Limitations:** Make sure users understand AI’s strengths and failure modes, including hallucinations and model version uncertainty (e.g., vague claims like "latest model").
- **Choose AI Tools Wisely:** Evaluate ChatGPT and Google Gemini output quality, especially in private markets contexts. Prefer open documentation on model training and update frequency.
- **Use Prompt Engineering:** Well-designed prompts can reduce hallucinations. Include explicit requests for source citations and cautious language.
- **Maintain Transparency with Principals:** Clearly communicate that AI is an assistant, not a primary source, and explain your verification procedures.
- **Ask Yourself: “What Would We Show an Auditor?”** This audit-focused mindset ensures governance and accountability remain central as AI gets incorporated.

Conclusion

AI tools like ChatGPT and Google Gemini offer compelling enhancements to family office analyst workflows but come with undeniable risk. Hallucinations — both factual and faithfulness-related — can erode data integrity, particularly in the private markets where confirmatory data is scarce.

A simple yet effective verification checklist centered around *source cross-checking*, *second reviewer sign-off*, and detailed documentation guards against these pitfalls. Paired with best practices like prompt design, model evaluation, and transparency, this approach enables family office teams to confidently embrace AI while upholding the high standards demanded by UHNW reporting and due diligence.



Remember: AI is a tool — not a source. Treat its outputs as a draft that requires human validation, and always ask, *"What would we show an auditor?"* Your governance will thank you.