

# Why ChatGPT Can't Analyze Your Research

How NotebookLM turns your pile of PDFs into a research brain that

AI FOR RESEARCH

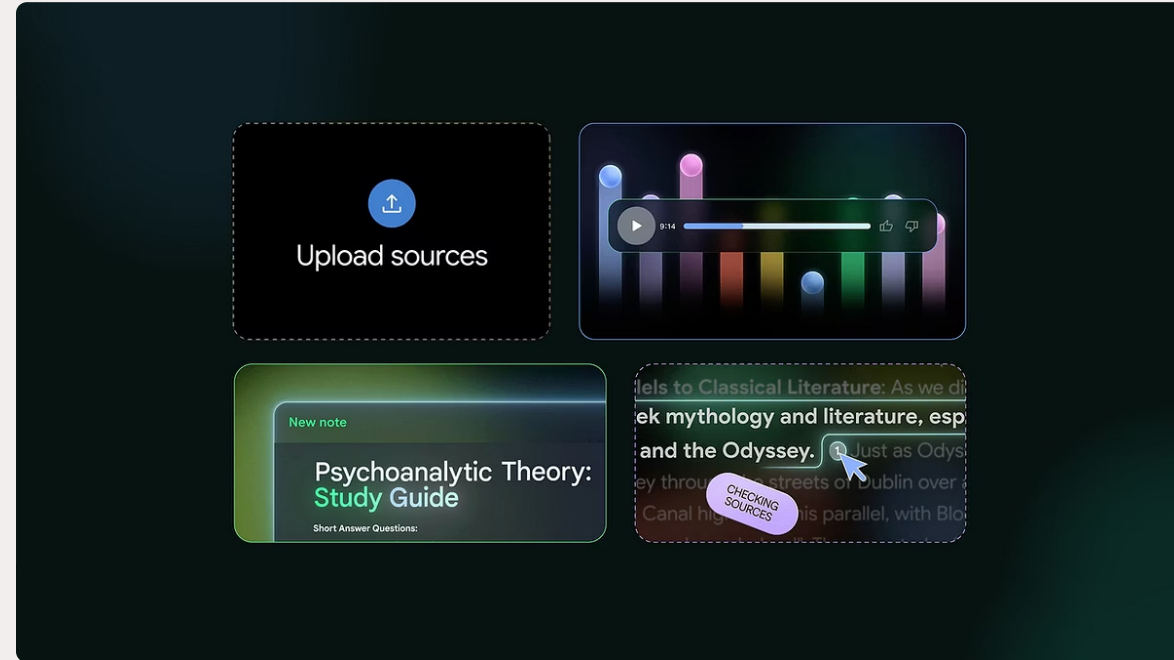
NOTEBOOKLM DEEP DIVE

Brought to you by Kripesh Adwani - Founder, UpskillAI.io



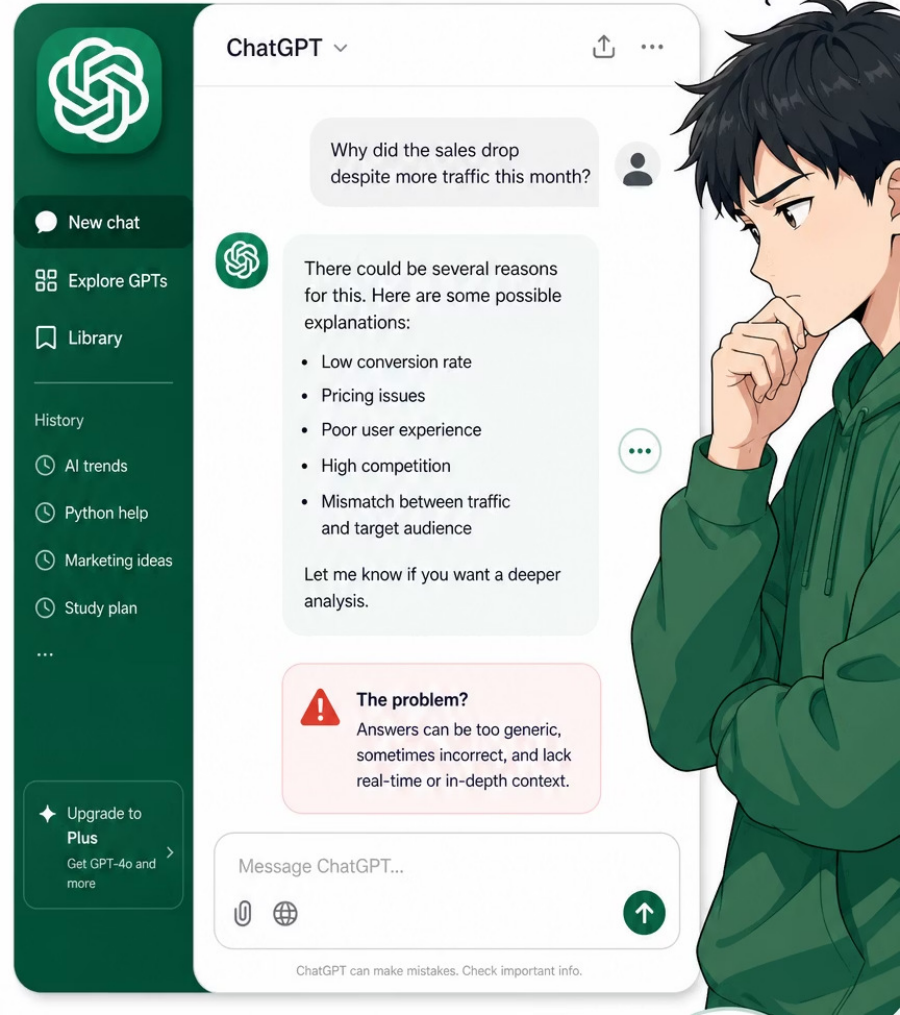
UPSKILLAI.IO

Scan to follow  
Kripesh's work



# Problem with ChatGPT

?



## The Problem Most People Don't Notice

You've done your research. You've downloaded PDFs, saved articles, collected reports. Now you want AI to help you make sense of it all.

So you open ChatGPT. You upload a PDF. You ask it a question. It gives you a confident answer. Sounds detailed. Sounds right.



Now click on one of the claims it made. Go back to the PDF. Try to find where it came from. **You can't.**

Because ChatGPT didn't actually read your PDF the way you think it did. It blended what was in your file with what it already knows from training data and it didn't tell you which part came from where.

# That's Not Analysis. That's a Best Guess.

## What ChatGPT Actually Does

Mixes your uploaded file with its own training data. Generates a confident-sounding answer. Doesn't distinguish between your source and its own knowledge.

**Result:** A best guess dressed up as an answer.

## What You Actually Need

An AI that reads *only* what you give it. That cites every single claim. That lets you click through to the exact paragraph in the exact document.

**Result:** Verifiable, trustworthy analysis.

The difference isn't subtle. For research, it's everything.

# Enter NotebookLM

This is NotebookLM, Google's research tool. Ask the same question you asked ChatGPT. But watch what happens when it answers.

- ✓ Every single claim has a citation. You can hover on it. You can click it. It jumps you to the **exact paragraph** in the exact document where that information came from.

## ChatGPT

A **thinking tool** - great for reasoning, writing, brainstorm and ideation.

## NotebookLM

An **analysis tool** - built specifically for working with your documents

For research, you need analysis. That's what this lesson is about.



# The Hallucination Numbers

~13%

## NotebookLM Hallucination Rate

Northwestern University, 2025 (Hagar, Agustianto & Diakopoulos, arXiv:2509.25498)

~40%

## ChatGPT & Gemini Rate

Same study, same conditions — on specific factual claims from documents

3x

## Improvement Factor

NotebookLM is roughly 3× more accurate on document-specific factual claims

📌 Small sample, directional only but the direction is clear. Source-grounding significantly reduces hallucination risk. It does **not** eliminate it. Always click the citation and verify.

# How the Interface Works

NotebookLM is organized into three panels, each with a distinct purpose. Understanding this layout is the first step to using it effectively.

## Sources (Left)

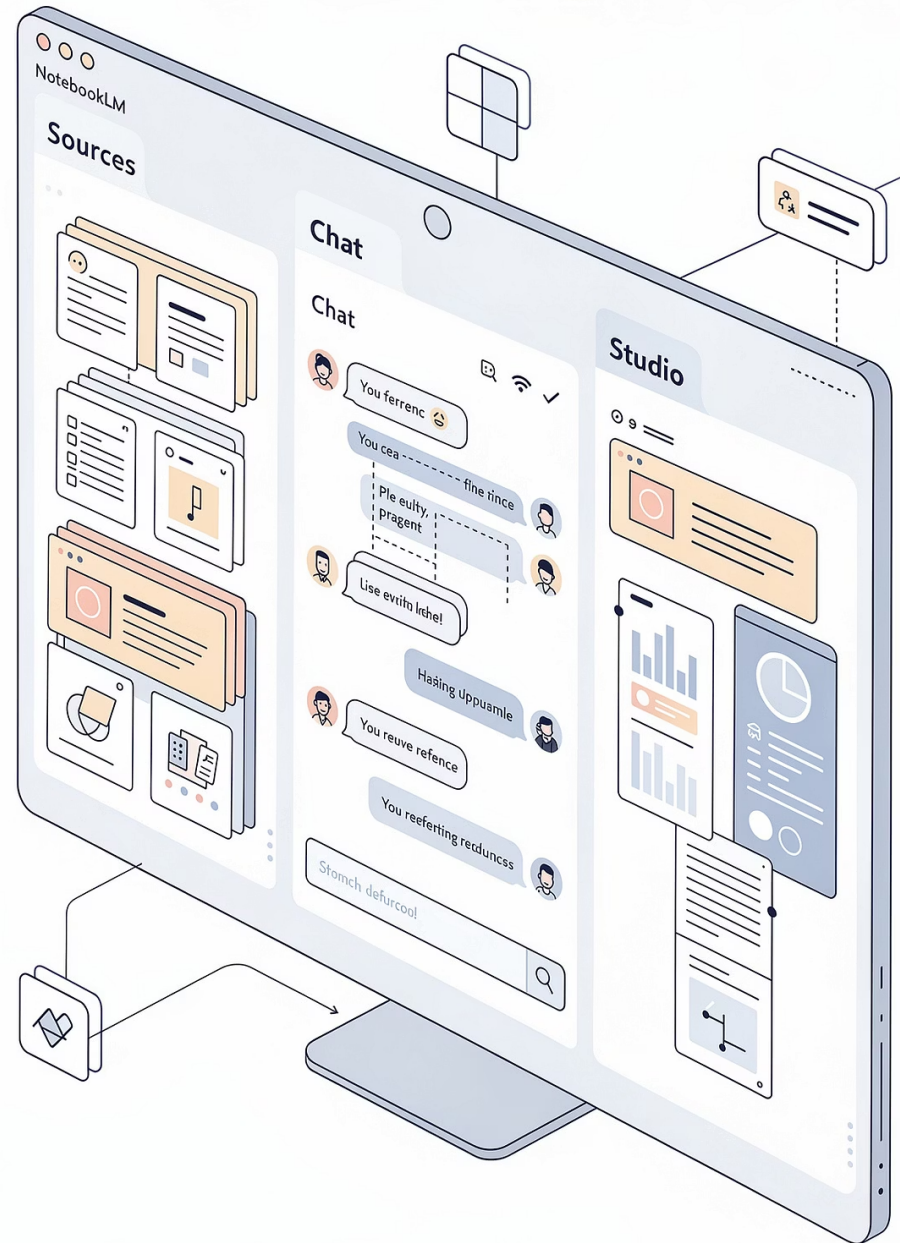
Upload and manage your documents. PDFs, Google Docs, YouTube links, audio files, and more. This is your research library.

## Chat (Center)

Ask questions about your sources. Every answer includes numbered inline citation chips — hover to preview, click to jump to the exact passage.

## Studio (Right)

Generate outputs - audio overviews, video scripts, slides, mind maps, and reports. Transform your research into shareable formats.



# What You Can Upload

Students are often surprised by how many formats NotebookLM accepts. Almost anything you'd use in research can go in.

## Documents & Text

- PDFs (most common use case)
- Google Docs & Google Slides
- Microsoft Word (.docx)
- Plain text / Markdown
- Copied/pasted text
- EPUB files (added early 2026)

## Web & Media

- Public website URLs
- YouTube videos (imports transcript — must be public)
- Audio files (mp3, mp4, wav) — transcribed on import
- Images
- Google Sheets / CSV (added Nov 2025)

 The 50-source limit applies on the free tier. Merge short related documents into one file to conserve slots on large research projects.

# How NotebookLM Compares to Other Tools

Every AI tool has a job it's actually built for. Using the wrong tool for the wrong task is where people go wrong.

| Tool             | Best For                                    | Hallucination Risk       |
|------------------|---------------------------------------------|--------------------------|
| NotebookLM       | Analyzing YOUR documents with citations     | Low (but not zero)       |
| Perplexity       | Finding information on the live web         | Medium                   |
| ChatGPT / Claude | Reasoning, writing, ideation, brainstorming | Higher on specific facts |
| Gemini           | Google ecosystem tasks, Canvas              | Medium                   |

✔ **Gemini Integration:** You can now attach multiple NotebookLM notebooks as sources inside the Gemini app — solving the "notebook silo" problem. Query across multiple notebooks with live web search on top.

# Analyzing Financial Reports

Run this prompt after uploading your financial reports:

Create a comparison table across all uploaded reports with these columns: Revenue, Revenue growth % YoY, Net profit margin %, Debt level, Cash flow from operations.

Get all figures directly from the reports.

Mark "Not found in sources" where data is missing.

For a deeper analysis, expand the table to include these metrics:

## Revenue & Growth

Total operating revenue, YoY growth %, 3-year CAGR

## Profitability

EBITDA margin %, Net profit margin %, Operating strength

## Innovation

R&D spend (expensed + capitalized), R&D as % of revenue

## Financial Health

Capex, Debt level, Cash flow from operations

## Market Position

EV revenue/volumes, Export revenue, Market share

# Business Risk Extraction

After your financial comparison table, run this follow-up prompt to extract structured risk intelligence from the same filings:

List the top business risks mentioned in these filings.  
Group them into: market risk, operational risk,  
regulatory risk, debt risk, competition, supply chain.  
Quote exact wording from the filing where possible.

Then go deeper on revenue structure:

Extract a table of segment-wise and geography-wise revenue  
(and, if available, margins) for each year in these reports.

Then explain in plain language which segments are growing  
fastest and which are dragging performance.

 Always follow up with: *"Plot them in an infographic to visually compare the key financial metrics."* NotebookLM's Studio panel can generate visual comparisons directly from the data it extracted.

# Analyzing Research Papers

NotebookLM is exceptionally powerful for academic research. Upload multiple papers and run structured prompts to extract, compare, and synthesize findings across all of them.

01

## Summarize a Single Paper

Summarize this paper: research question, hypothesis, methodology, dataset/sample, key findings, limitations, and practical implications. Use simple language.

02

## Explain the Methodology

Explain the methodology step by step. What data was used, what model or framework was applied, and why was it appropriate?

03

## Find Limitations

List all limitations mentioned by the authors. Then identify additional possible limitations not explicitly stated but inferable from the study design.

04

## Compare Multiple Papers

Compare uploaded papers: author/year, research question, method, data/sample, main finding, limitations, and how it relates to the other papers.

05

## Identify Research Gaps (Use With Gemini)

Based on these papers, identify possible research gaps. For each gap, explain why it matters and suggest a possible research question.

# Market & Industry Research

Upload competitor websites, product pages, customer reviews, and industry reports.

NotebookLM synthesizes them into structured intelligence.

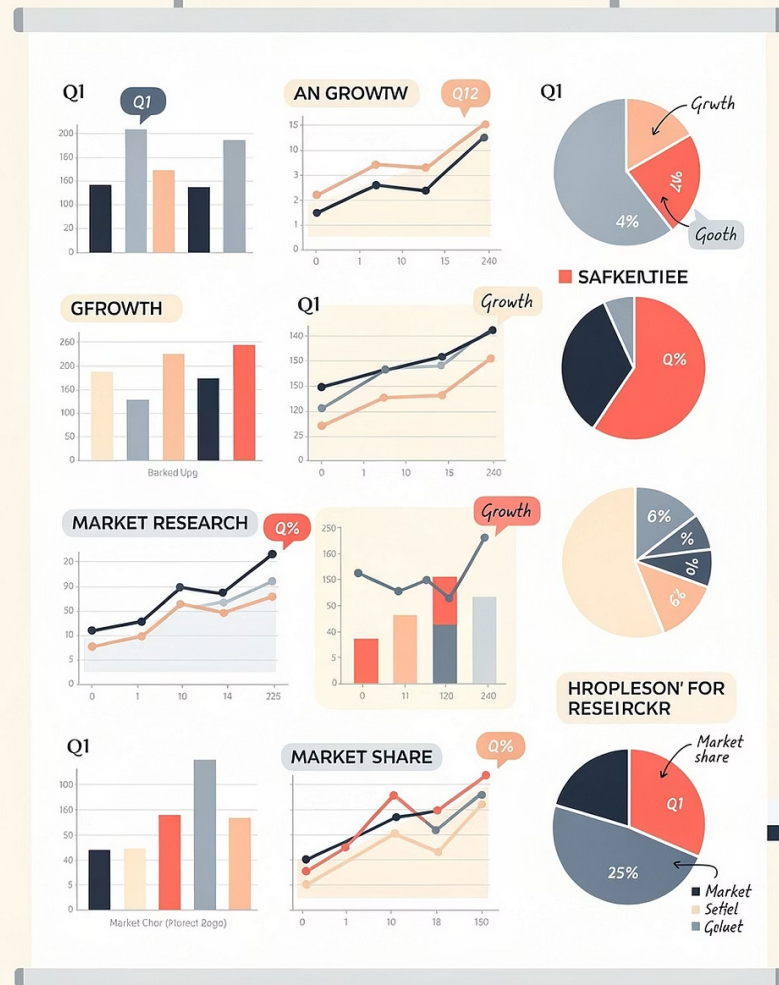
## Industry Overview Prompt

Give me an industry overview based on the uploaded sources. Cover market size, growth rate, key players, customer segments, major trends, and risks.

## Competitor Comparison Prompt

Compare the companies mentioned in these sources. Create a table with: business model, target customers, pricing, strengths, weaknesses, geographic presence, and recent developments.

Then ask: *"What do customers complain about most across these sources?"*



# Understand Your Research

## Audio Feature

NotebookLM's Studio panel can generate audio overviews of your entire notebook, like a podcast episode summarizing your research.

### Deep Audio

A full podcast-style conversation between two AI hosts discussing your sources. You can even ask questions mid-episode. Great for long commutes or complex topics.

### Brief Audio

A 5-minute condensed overview of the key findings. Perfect for a quick refresh before a meeting or presentation.

### Multilingual

Audio can be generated in Hindi and other languages, making your research accessible in your preferred language.

Customize the audio with this prompt: *"Focus on key findings and practical implications. Skip methodology details. Keep the tone accessible for a non-expert audience."*

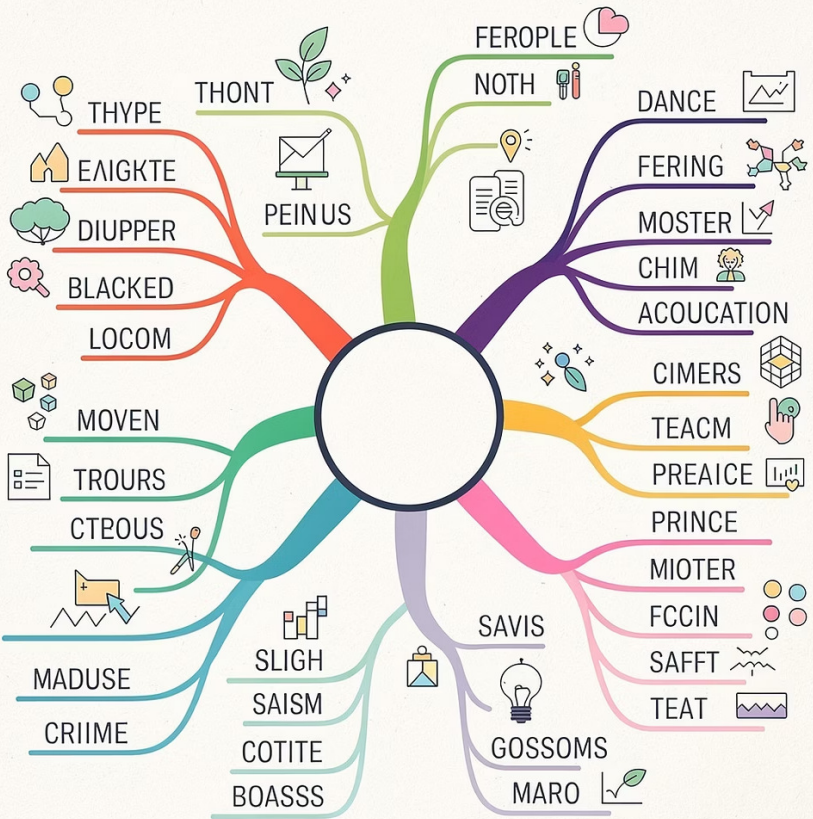
# Mind Maps & Visual Outputs

Beyond text and audio, NotebookLM's Studio panel can generate visual mind maps of your research - automatically organizing themes, subthemes, and connections from your sources.

 They give you a bird's-eye view of your entire research landscape before you dive into specific questions.

Use mind maps to:

- Identify which themes are most heavily supported across your sources
- Spot gaps where you need to find more sources
- Plan the structure of a report, video, or presentation
- Share a visual summary with collaborators who haven't read the sources



# For Students: Build a Learning Plan

Upload all your study materials - PDFs, notes, YouTube video links, book chapters. Then run this prompt:

You are my learning coach. Based on these sources, design a 4-week learning plan for [topic].

For each week: theme, daily tasks, resources to read or watch from the uploaded sources, and a mini-quiz.

✓ Your scattered resources become a structured study program - built entirely from what you already have. No new materials needed.



# The Corpus Mapping Prompt

Get research map before you ask questions.

You are my research copilot for this notebook.

1. Scan all sources and list the main themes, subthemes, and recurring concepts.
2. For each theme, list which sources support it and note any conflicts between sources.
3. Identify obvious gaps where the current sources are weak or missing.

Only use the uploaded sources. Cite every claim.

 Before we do anything else, read all my sources and tell me what this notebook contains, how the sources connect, where they agree or disagree, and what information is missing.

# The Research Brief Prompt

After corpus mapping, use this prompt to synthesize your sources into a structured, shareable brief:

Using ONLY the uploaded sources, create a 1-page research brief with:

- Context and problem definition
- Key findings grouped by theme
- Contradictions or disagreements between sources
- Open questions or gaps
- What the evidence suggests I should do next

Use headings. Cite every key claim.

## When to Use This

Before writing a report, preparing a presentation, briefing a client, or starting a new project. Turns 10 documents into one coherent summary in minutes.

## What Makes It Powerful

It surfaces contradictions between sources — something you'd easily miss reading documents one by one. Disagreements between sources are often where the most interesting insights live.

# Important Caveats

The difference between using this tool well and getting burned by it.

1

## Hallucination Is Reduced, Not Eliminated

13% is much better than 40%. But it's not zero. Always click the citation and verify before using any output in real work. ESPECIALLY from scanned PDFs with bad OCR quality.

2

## Source Quality Determines Output Quality

If you upload weak or biased sources, you'll get weak or biased output. Garbage in, garbage out. NotebookLM is only as good as what you feed it.

3

## Outputs Don't Auto-Save

If you close the tab without exporting, that work is gone. Always click "Save to Note" or export before you close the browser.

4

## Don't Upload Confidential Data on Personal Accounts

For sensitive client work, use a Google Workspace account because that's where Google guarantees your data isn't used for model training.

5

## 50-Source Limit on Free Tier

For most projects that's plenty. But for large research notebooks, you'll hit it. Fix: merge short related documents into one before uploading.

# Prompts Reference Card



Scan to follow Kripesh Adwani's work — [UpskillAI.io](https://UpskillAI.io) ———→ ———— > —————> —————→

A complete reference card of every prompt covered. Copy, paste, and adapt for your own notebooks.

|   |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <div>1. Corpus Mapping — Run First in Any New Notebook</div> <div>"You are my research copilot for this notebook. 1. Scan all sources and list the main themes, subthemes, and recurring concepts. 2. For each theme, list which sources support it, and note any conflicts between sources. 3. Identify obvious gaps where the current sources are weak or missing. Only use the uploaded sources. Cite every claim."</div> |
| 2 | <div>2. Research Brief</div> <div>"Using ONLY the uploaded sources, create a 1-page research brief with: Context and problem definition, Key findings grouped by theme, Contradictions or disagreements between sources, Open questions or gaps, What the evidence suggests I should do next. Use headings. Cite every key claim."</div>                                                                                     |
| 3 | <div>3. Financial Comparison Table</div> <div>"Create a comparison table across all uploaded reports with these columns: Revenue, Revenue growth % YoY, Net profit margin %, Debt level, Cash flow from operations. Get all figures directly from the reports. Mark 'Not found in sources' where data is missing."</div>                                                                                                     |
| 4 | <div>4. Business Risk Extraction</div> <div>"List the top business risks mentioned in these filings. Group them into: market risk, operational risk, regulatory risk, debt risk, competition, supply chain. Quote exact wording from the filing where possible."</div>                                                                                                                                                       |
| 5 | <div>5. Research Paper Comparison</div> <div>"Compare the uploaded papers in a table: Author/year, research question, method, data/sample, main finding, limitations, how it relates to the other papers."</div>                                                                                                                                                                                                             |
| 6 | <div>6. Research Gap Identification</div> <div>"Based on these papers, identify possible research gaps. For each gap, explain why it matters and suggest a possible research question."</div>                                                                                                                                                                                                                                |
| 7 | <div>7. Content Creation from Research</div> <div>"Based on all uploaded research on [topic]: 1. Create an outline for a 10-minute YouTube video. 2. List 10 hooks for short-form video — curiosity, data, contrarian angles. 3. Suggest 5 blog post angles. Ground everything in the sources. Cite at least one source per idea."</div>                                                                                     |
| 8 | <div>8. Student Learning Plan</div> <div>"You are my learning coach. Based on these sources, design a 4-week learning plan for [topic]. For each week: theme, daily tasks, resources to read or watch from the uploaded sources, and a mini-quiz."</div>                                                                                                                                                                     |
| 9 | <div>9. Audio Overview Customization</div> <div>"Focus on key findings and practical implications. Skip methodology details. Keep the tone accessible for a non-expert audience."</div>                                                                                                                                                                                                                                      |

✔ **The master workflow:** Use **Perplexity** to discover sources → **NotebookLM** to analyze and cite them → **ChatGPT or Claude** to write and polish the final output. Every tool doing exactly what it was built for.