

Financial Audit (Legal Case)

AI-Assisted Document Analysis & Forensic Financial Review

2025

6 Deliverable Documents	~12 Hours Total Project Time	90%+ AI Transcription Accuracy	Weeks → Hours Time Compression vs. Manual
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Section 1: What Was Built

This project produced a comprehensive financial audit of civil court discovery documents — specifically four bank account statements spanning four years, provided in deliberately chaotic form: out of order, partially redacted, and consisting of physical documents that had been printed and re-scanned at poor quality, with pages upside down or rotated sideways.

The delivered audit consisted of six documents plus a visual timeline:

- A per-file summary for every source document provided, including specific file and page citations for every claim
- A master narrative document tying the entire financial picture together
- A flowchart-style visual timeline (PowerPoint) mapping money movement account-to-account, year-over-year, with dollar amounts and dates
- A final questions document delivered to the attorney identifying anomalies, gaps, discrepancies between sworn court statements and actual records, and unreconciled dollar amounts

Every assertion in the audit is backed by a specific file reference and page number — enabling the attorney to locate, verify, and introduce evidence into legal proceedings with precision.

Section 2: Why It Was Built

A civil court case required analysis of financial records to investigate suspected mismanagement by a personal fiduciary. The documents provided for review were structured to be as difficult to analyze as possible: chaotic ordering, poor scan quality, missing data, redactions, and pages oriented in every direction.

Core Question: Can AI-assisted document analysis convert a multi-week forensic review task into a structured, citation-backed audit — with a fraction of the time and no formal legal or financial training?

The purpose was personal and experimental: to apply AI tools to a high-stakes, real-world document analysis problem where precision and citation accuracy are not optional — and to determine whether NotebookLM could function as a serious forensic analysis tool under genuinely difficult conditions.

Section 3: Starting Competence

Legal Experience	Minimal — no background in legal proceedings or civil litigation
Financial Auditing	No formal training or prior experience
NotebookLM Use	First substantive use of the tool for a high-stakes project
Claude Experience	Extensive — primary AI collaborator across multiple prior projects
Domain Skills Transferred	Documentation discipline: precision, citation requirements, and the principle that every claim must be traceable to a specific source
Technical Background	Organizational planning and structured analysis applied to a new domain

Section 4: How AI Was Used

Initial Attempt — Claude

The project began with an attempt to use Claude directly to analyze and transcribe the scanned documents. Two significant limitations emerged: the context window was insufficient to hold all source documents simultaneously, and Claude struggled with the low scan quality of the physical documents. Several hours were invested attempting to transcribe a single document into Excel format to improve Claude's ability to process the data — producing a usable but inefficient result that did not justify the time cost.

Pivot to NotebookLM

After exhausting Claude's practical limits for this task, NotebookLM was selected based on its reputation for a significantly larger context window and high citation accuracy with minimal hallucinations. All source legal documents were ingested simultaneously, and structured analysis began.

Document Analysis Workflow

The analysis proceeded account by account, following the flow of money:

- Account 1 (primary source): Traced all outflows, documented destinations, dates, and amounts month by month
- Account 2 (primary transfer destination): Repeated the analysis, documenting inflows and subsequent outflows

- Account 3 (secondary destination): Documented available data, flagged redactions and gaps explicitly

For each account, every transaction was classified against provided accounting records — distinguishing money spent for its claimed purpose from money that was not. Claimed expenditures were then cross-referenced against actual receipts and check records provided in discovery.

Handling Degraded Source Documents

NotebookLM demonstrated above 90% accuracy in reading and transcribing scanned documents — including upside-down pages, rotated pages, and poor-quality photocopies. Errors occurred approximately once every 5 to 10 pages of scanned material. A continuous human audit layer was maintained throughout: every figure cited was verified against the source document before inclusion in any deliverable.

Key Workflow Insight: NotebookLM's citation feature — which links each response directly to the source document — was essential for maintaining audit integrity. While the tool did not always identify the specific PDF page number, it provided direct navigation to the source chunk, which was then manually resolved to an exact page citation.

Visual Timeline Construction

After completing the document-by-document analysis, all verified financial flows were compiled into a PowerPoint visual: a flowchart-style timeline showing account-to-account money movement with dollar amounts, dates, and year-over-year totals. This provided the attorney with an immediate high-level picture of what happened, supported by the detailed per-file citations underneath.

Attorney Deliverable — Questions Document

The final document delivered to the attorney was a structured list of questions and flagged items: anomalies in the records, gaps where data was missing or redacted, line-item discrepancies between sworn court statements and actual account activity, and unreconciled dollar amounts. This document was designed to guide the attorney's legal strategy rather than serve as direct court evidence.

Section 5: Timeline & Conditions

Initial Claude Attempts	Several hours — abandoned due to context and scan quality limitations
NotebookLM Analysis Phase	Approximately 4 hours per day across 3 days
Total Active Time	~12 hours (including all verification and audit passes)

Work Conditions	Solo project; no external deadline or time pressure
Source Material	Four bank accounts, four years of statements, out-of-order and degraded scans
External Assistance	None — entirely AI-guided, solo execution

Section 6: Outcome & Evidence

The project delivered a complete forensic financial audit package to the attorney, consisting of six documents and one visual deliverable. The attorney received:

- A per-file summary for every source document — with specific page citations for every fact claimed
- A unified narrative document synthesizing the complete financial picture across all accounts and years
- A visual timeline (PowerPoint) mapping money flows account-to-account with dates and amounts
- A structured questions document identifying anomalies, gaps, and discrepancies for legal follow-up

The audit enables the attorney to understand the full financial picture at a glance, locate specific evidence by file and page reference, and make informed decisions about what to introduce in court — without conducting the underlying document review themselves.

What This Represents: A task that would conservatively require multiple weeks of full-time manual work — deconstructing, reconstructing, and cross-referencing four years of chaotic financial records — was completed in approximately 12 hours with a higher degree of structural organization and citation precision than manual methods would reliably produce.

Section 7: Key Metrics

Primary AI Tool	NotebookLM (document analysis and citation); Claude (synthesis and drafting)
Source Documents	4 bank account statement sets spanning 4 years
Document Condition	Out of order, poor scan quality, pages upside down and rotated, partial redactions
Deliverable Documents	6 written documents + 1 PowerPoint visual timeline
AI Transcription Accuracy	Above 90% — errors approximately 1 per 5 to 10 scanned pages
Human Audit Layer	Every cited figure verified against source before inclusion
Total Active Time	~12 hours across 3 days

Manual Equivalent	Multi-week full-time effort
Time Compression	Estimated 10-20x reduction in analysis time
External Help	None — solo with AI guidance
Prior Legal Experience	None
Prior Financial Auditing	None

Section 8: Lessons Learned

Lesson 1: Match the Tool to the Task — Context Window Is Not Optional

The project began with the wrong tool. Claude's context window, while powerful for many tasks, was insufficient to hold multiple years of bank statements simultaneously — and its ability to read degraded scanned images was limited. Recognizing the mismatch and pivoting to NotebookLM after a structured evaluation saved significant time and produced dramatically better results. For large-scale document analysis with high citation demands, NotebookLM is purpose-built in a way general LLMs are not.

Lesson 2: AI Accuracy at Scale Still Requires Human Verification

NotebookLM's above-90% transcription accuracy on degraded scans is genuinely impressive — but in a legal context, a 5-10% error rate on financial figures is unacceptable. The correct workflow is not AI-then-trust; it is AI-then-audit. Every figure cited in the final deliverables was manually verified against the source document. This verification layer is not optional when the output will inform legal strategy.

Lesson 3: Precision Discipline Transfers Directly

The habit of backing every claim with a specific, traceable citation — developed through years of working with orders, and legally binding guidance — was the single most transferable skill in this project. The instinct that assertions without citations are not assertions at all is what made the final deliverables usable by an attorney rather than merely informative to a layperson.

Lesson 4: The Visual Summary Is Not Optional

A forensic document review that lives entirely in text is difficult to absorb. The PowerPoint timeline — mapping money flows visually across accounts and time — transformed a complex, detailed analysis into something immediately comprehensible. For any high-stakes audience that needs to act on the findings, the visual deliverable is as important as the citation-backed details underneath it.

What This Project Proves

- High-stakes AI application: Forensic document analysis for active civil litigation — with zero

margin for error.

- Tool selection judgment: Recognized when the primary tool was wrong, pivoted decisively, and recovered efficiently.
- Precision under pressure: Every claim backed by a specific source citation — meeting the evidentiary standard of a legal proceeding.
- Massive time compression: A multi-week manual task completed in 12 hours without sacrificing accuracy or rigor.
- Domain transfer: A discipline of rigorous documentation and traceable citation applied directly to a high-stakes legal context.

--- END OF CASE STUDY ---