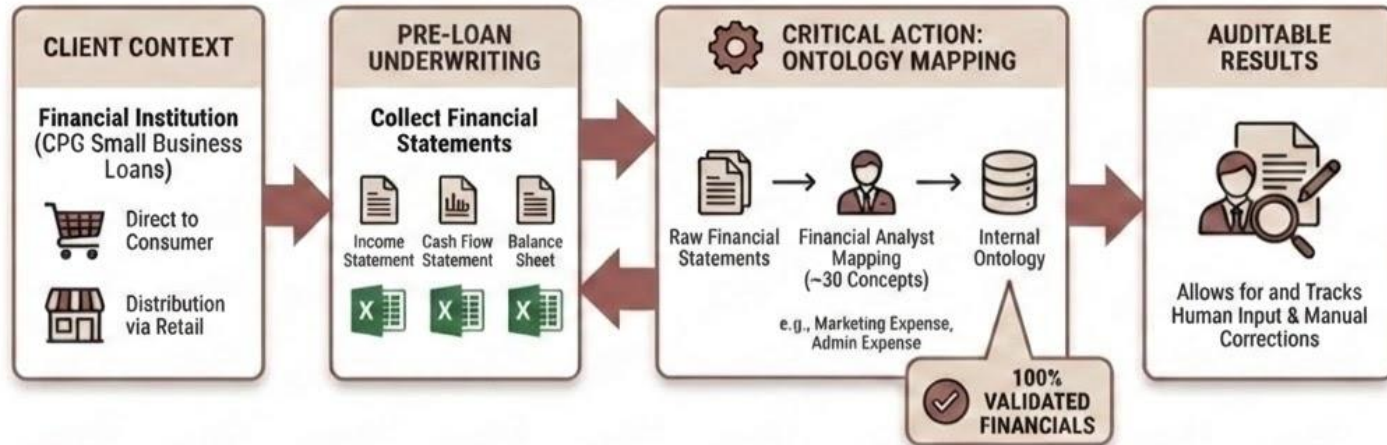


Exgent - A Finance Workflow

- Exgent is designed to solve the problem of evaluating a company's financials before a loan is made.
- As companies have different reporting formats, the accounts must be standardized so the internal loan evaluation system can process it.
- Exgent provides an Agent solution to a task that is currently 100% manual



Our Goal

Turn excel files into standardized reports. 30+ standard tags need to be associated

	A	B	C
1	Income Stmt		
2			
3		Jan '23	Feb '23
4			
5	Revenue - X Men		
6	4100 - X Men Sales CA	2,051,332.45	1,820,744.74
7	4100-12 - X Men Sales KS		
8	4100-14 - X Men Sales NJ		
9	4101 - Fighting Weight Sales		
10	4203 - Revenue - Software	-	-
11	4102 - Revenue - Consultation	99,250.00	84,525.00
12	4120 - Sales Discounts	(322,587.41)	(273,049.18)
13	4140 - Refund Allowance X CA		
14	4140-12 - Refund Allowance X KS		
15	4140-14 - Refund Allowance X NJ		
16	4140-16 - Refund Allowance Fighting Weight		
17	4140 - Refund Allowance	-	-
18	Total Revenue	1,827,995	1,632,221
19			
20	Cost of Products Revenue		
21	5100 - Cost of Goods Sold-Pharmacy	224,420.64	207,160.20
22	5101 - Cost of Goods Sold-COGS Packaging	19,848.31	45,198.55
23	5103 - Cost of Goods Sold-Merchant Account F	123,486.51	115,356.55
24	5104 - Cost of Goods Sold-Chargebacks	7,816.00	4,208.00



Standard tags	Income Stmt	
		Jan '23
	Revenue - X Men	
Gross Revenue	4100 - X Men Sales CA	2,051,332.45
Gross Revenue	4100-12 - X Men Sales KS	
Gross Revenue	4100-14 - X Men Sales NJ	
Gross Revenue	4101 - Fighting Weight Sales	
Gross Revenue	4203 - Revenue - Software	-
Gross Revenue	4102 - Revenue - Consultation	99,250.00
Total Discounts	4120 - Sales Discounts	(322,587.41)
Total Cancellation and Returns	4140 - Refund Allowance X CA	
Total Cancellation and Returns	4140-12 - Refund Allowance X KS	
Total Cancellation and Returns	4140-14 - Refund Allowance X NJ	
Total Cancellation and Returns	4140-16 - Refund Allowance Fighting Weight	
Total Cancellation and Returns	4140 - Refund Allowance	-
Net Revenue	Total Revenue	1,827,995
	Cost of Products Revenue	
Gross Product Cost	5100 - Cost of Goods Sold-Pharmacy	224,420.64
Gross Product Cost	5101 - Cost of Goods Sold-COGS Packaging	19,848.31
Shipping & Fulfillment Cost	5103 - Cost of Goods Sold-Merchant Account F	123,486.51
Shipping & Fulfillment Cost	5104 - Cost of Goods Sold-Chargebacks	7,816.00

Lets try gemini - How hard can it be?

- Open sheets
- Add prompt
- Ask gemini to insert ontology tags

[illegible]

Settling on a no-compromise design - Dec 30th

- Users **upload excel files** into a React application
- Users must be able to **interact with the excel sheet** (Similar to canvas in modern AIs)
- Make the process interactive so the analyst remains involved
 - **Remove the boring parts of validating financials** “such as checking the totals for each date”.
- **Divide and conquer the problem** that is too hard to solve in single step
 - Agent to understand **sheet structure**
 - Another agent to take logical part of sheet **and tag them**
 - Testing on sample data in gemini web app with prompt engineering has been promising..
- Must maintain **Audit trail** and be able to review all changes.

I choose with Python Fast API and React 13 for the frontend, Google ADK for the agent framework.

Github: <https://github.com/sanjayvenkat2000/exgent>

Demo

Expand									
sample.xlsx									
sample.xlsx - 2020-10-10-10:10:10									
id	name	age	sex	height	weight	blood pressure	heart rate	respiratory rate	oxygen saturation
1	John Doe	30	Male	175	70	120/80	70	20	98
2	Jane Smith	25	Female	160	55	110/70	65	18	97
3	Mike Johnson	45	Male	180	85	130/90	75	22	96
4	Sarah Williams	35	Female	165	60	125/85	70	20	97
5	David Brown	50	Male	170	90	140/100	80	24	95
6	Emily Davis	28	Female	155	50	115/75	60	16	98
7	Chris Wilson	40	Male	175	75	125/85	70	20	97
8	Amanda Moore	32	Female	160	55	120/80	65	18	98
9	Robert Taylor	55	Male	185	100	150/110	85	26	94
10	Michelle Clark	22	Female	150	45	110/65	55	15	99
11	Kevin Lewis	48	Male	170	80	135/95	75	22	96
12	Nicole Hall	38	Female	165	65	125/85	70	20	97
13	Brandon King	52	Male	175	95	145/105	80	24	95
14	Samantha Green	27	Female	155	50	115/75	60	16	98
15	Tyler Adams	42	Male	175	75	125/85	70	20	97
16	Hannah Baker	33	Female	160	55	120/80	65	18	98
17	Gregory Nelson	58	Male	180	110	160/120	90	28	93
18	Victoria Perez	24	Female	150	45	110/65	55	15	99
19	Benjamin Roberts	47	Male	170	80	135/95	75	22	96
20	Olivia Scott	36	Female	165	65	125/85	70	20	97
21	Isaac Turner	51	Male	175	95	145/105	80	24	95
22	Grace Phillips	26	Female	155	50	115/75	60	16	98
23	Frank Campbell	41	Male	175	75	125/85	70	20	97
24	Chloe Evans	31	Female	160	55	120/80	65	18	98
25	Leo Parker	56	Male	180	115	165/125	95	30	92
26	Madeline Young	23	Female	150	45	110/65	55	15	99
27	Samuel King	46	Male	170	80	135/95	75	22	96
28	Abigail Wright	37	Female	165	65	125/85	70	20	97
29	Julian Lopez	53	Male	175	95	145/105	80	24	95
30	Skylar Hill	25	Female	155	50	115/75	60	16	98
31	Victor Green	43	Male	175	75	125/85	70	20	97
32	Quinn Adams	34	Female	160	55	120/80	65	18	98
33	Harvey Baker	57	Male	180	110	160/120	90	28	93
34	Isabella Nelson	21	Female	150	45	110/65	55	15	99
35	Christopher Perez	44	Male	170	80	135/95	75	22	96
36	Charlotte Roberts	35	Female	165	65	125/85	70	20	97
37	Robert Scott	54	Male	175	95	145/105	80	24	95
38	Amelia King	28	Female	155	50	115/75	60	16	98
39	William Hill	49	Male	175	75	125/85	70	20	97
40	Evelyn Green	32	Female	160	55	120/80	65	18	98
41	James Adams	59	Male	180	120	170/130	100	32	91
42	Sophia Baker	20	Female	150	45	110/65	55	15	99
43	Benjamin Clark	45	Male	170	80	135/95	75	22	96
44	Mia Evans	30	Female	160	55	120/80	65	18	98
45	Lucas Green	50	Male	175	95	145/105	80	24	95
46	Chloe Hill	25	Female	155	50	115/75	60	16	98
47	Henry King	40	Male	175	75	125/85	70	20	97
48	Victoria Lopez	33	Female	160	55	120/80	65	18	98
49	Sebastian Moore	52	Male	175	95	145/105	80	24	95
50	Madison Parker	27	Female	155	50	115/75	60	16	98

<https://youtu.be/WT1LHVl8Qgc>

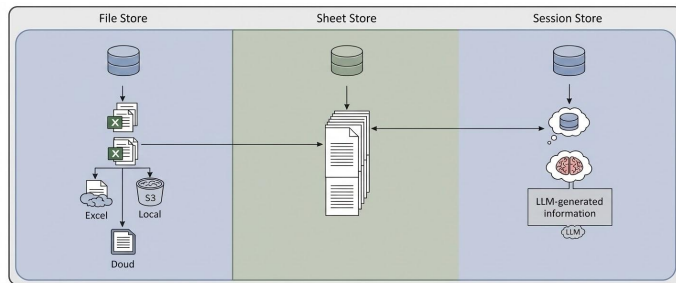
Learning - What the demo achieves

- Models are much better at dealing with csv or markdown than excel files.
 - Matches their training data more closely
- Context engineering is key
 - Small problems with **clean context** and **clear prompt instructions** proved very effective.
 - Asking the **model to rewrite its prompt** for clarity help as always.
- In order to build trust an interactive experience is ideal.
 - Show the user the end result
 - Show the user the steps
 - Allow the user to change the output of the model
 - Maintain an audit trail

Architecture highlights - Server

Storage

- **File Store:** Stores uploaded files and access control information
- **Sheet Store:** Stores metadata and validation information extracted from the excel files. This is a **versioned store**
- **Session Store:** Stores the LLM chat outputs that are synchronize with the Sheet Store



Agents

- **Sheet Structure Agent:** Purely responsible for understand the sheet structure
- **Tag Agent:** Responsible for tagging
- **Verify Agent:** Uses tools to validate the sheet numbers

Server

- REST inspired endpoints with streaming chat endpoint (all endpoints shown)

GET	/	Read Root
GET	/files	List Files
DELETE	/files/{file_id}	Delete File
GET	/files/{file_id}	Get File Details
GET	/sheets/{file_id}	Get Sheet Names
GET	/sheetdata/{file_id}/{sheet_idx}	Get Sheet Data By Index
GET	/sheetinfo/{file_id}/{sheet_idx}	Get Sheet Info By Index
POST	/sheetinfo/{file_id}/{sheet_idx}	Update Sheet Info
POST	/sheetchat/{file_id}/{sheet_idx}	Sheet Chat Stream
GET	/sheetchat/history/{file_id}/{sheet_idx}	Get Sheet Chat History
POST	/upload	Upload File

Architecture highlights - Client

Not Much: “Good react app. Supports streaming for agent”

- **Use best of class libraries:** React apps can break down quick if good design is not followed.
 - Tanstack useQuery is used here to borrow the great work they do.
- Abstract all service calls to a single file, we need to implement authentication etc. (one file to change later).
- Use good state management using providers
 - Providers allow good access without passing props all over the place (prop tunneling)
- Do not use **useEffect(..)**, where possible, as this is an anti-pattern and causes issues very fast that are hard to debug.

Welcome to Exgent

Your professional AI agent designed to handle **very large Excel files** with ease. Exgent's **Primary Objective** is to tag the data into your internal ontology. You can also **converse** with Exgent about information in the files.

Large File Support

Internal Ontology Tagging

Instant Insights

Upload Excel File

Drag & drop or click to upload

Select File

Exgent

sample.xlsx

Created on 1/4/2026 6:41:01 PM

sample_income_stmt

sample_balance_sheet

blank_detection

Tags

Income Statement

A	B	C	D	E	F	G	H
1							
2							
3	Assets						
4	Current Assets						
5	Cash and bank balances	6.03	876608.52	534286.69	1215766.66	622295.87	405764.78
6	Cash and bank balances		0.0	0.0	0.0	250568.25	400970.28
7	Accounts receivable		0.0	0.0	0.0	0.0	10000.0
8	Inventory	4.98	194663.35	191110.6	169076.36	226574.95	230138.58
9	Unclear	3.49	132731.93	175103.29	154716.37	149278.61	168129.44
10	Accounts receivable	0.03	25651.03	25651.03	25651.03	25651.03	25651.03
11	Accounts receivable	0.0	0.0	23602.46	0.0	103794.36	91294.97
12	Accounts receivable	41	0.0	0.0	0.0	0.0	0.0
13	Accounts receivable						
14	Cash and bank balances						
15	Total Current Assets						
16		8.12	1229654.83	949754.07	1565209.4200000002	1378163.0700000003	1331949.08
17	Property, Plant, & Equipment	87	113682.28	141445.02	145402.98	154847.46	157766.92
18	Other Long Term Assets	0.64	187044.87	239011.92	268493.33	313153.35	423685.23
19	Other Long Term Assets		0.0	0.0	0.0	53000.0	75329.58
20	Other Long Term Assets		0.0	0.0	250.0	0.0	250.0
21	Unclear	39.630000000004	1530381.98	1330211.0099999998	1079355.7300000002	1899163.8800000004	1988980.81
22							
23							
24	Liabilities and Equity						
25							