

Generative AI chatbot for Q&A and document summarization

Private equity firm

Developed a chatbot leveraging OpenAI GPT models to enhance operational efficiency and accelerate response times by reducing the time spent on manual data interpretation, optimizing report preparation, and improving data organization

documents using Gen-Al chatbot

Picture this...

You're looking for preparing draft summaries based on diverse documents that are vital for daily operations and decision-making processes, but the datasets include non-proprietary data such as public filings, earnings transcripts, investor presentations, etc., along with proprietary documents often in an unstructured format.

Private equity firm needs to address Q&A and summarize

You turn to Accordion.

We partner with your team to enhance operational efficiency and accelerate response times by reducing the time spent on manual data interpretation, optimizing report preparation, and improving data organization, including:

- 1) Developing a Conversational AI Platform leveraging OpenAI GPT and Anthropic Claude models capable of processing and summarizing diverse document types, both proprietary and non-proprietary.
- 2) Enabling private Chat GPT for firm-wide use to provide users with private and secure access to OpenAl API
- 3) Building an organizational wide knowledge base with Retrieval-Augmented Generation, enabling information extraction and content summarization.
- 4) Developing analytical dashboards to assess user engagement and track the cost overheads associated with the system's operations.
- 5) Building a custom MS word add-in to perform actions such as generate draft content, Q&A session, sourcing information from user uploaded documents etc.
- 6) Developing a user-friendly interface to facilitate seamless interactive conversations.

Your value is enhanced.

You have reduced the turnaround time in preparing summaries and reports by ~5x, minimizing manual data interpretation and enhancing the efficiency of report preparation processes. You have improved data security through the implementation of ring-fencing measures, which restricts the transfer of data outside the client environment.

KEY RESULT

 Reduced turnaround time by ~5x times

VALUE LEVERS PULLED

- Sales and customer analytics
- · Cash reconciliation

3

Generative AI chatbot for Q&A and document summarization

Situation

- Client leveraged a wide range of diverse documents that are vital for its daily operations and decision-making processes
- Datasets included non-proprietary data such as public filings, earnings transcripts, investor presentations, etc., along with proprietary documents often in an unstructured format
- Client spent a significant amount of time reviewing and preparing draft summaries based on the documents
- Partnered with the client to enhance operational efficiency and accelerate response times by reducing the time spent on manual data interpretation, optimizing report preparation, and improving data organization

Accordion Value Add

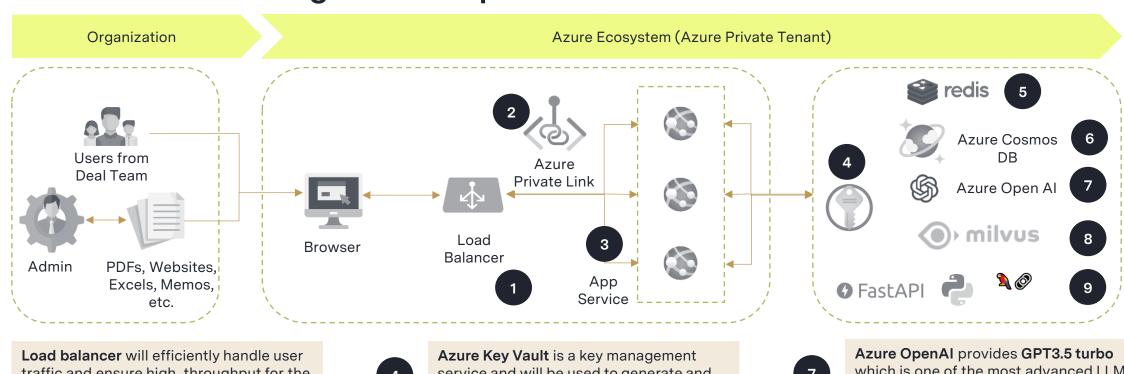
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Impact

- Reduced the turnaround time in preparing summaries and reports by ~5x, minimizing manual data interpretation and enhancing the efficiency of report preparation processes
- Improved data security through the implementation of ring-fencing measures, which restricts the transfer of data outside the client environment

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Chatbot solution design - Azure platform



- traffic and ensure high throughput for the application services
- service and will be used to generate and store keys used for data encryption

which is one of the most advanced LLM but can be swapped with similar LLMs

- Azure Private Link is a virtual network service and will provide an isolated private network for components to communicate
- Redis is a high throughput datastore and will be useful for caching, session storage and application throttling
- Milvus is an open-source vector database and will be used to store the vectorized documents and perform similarity search

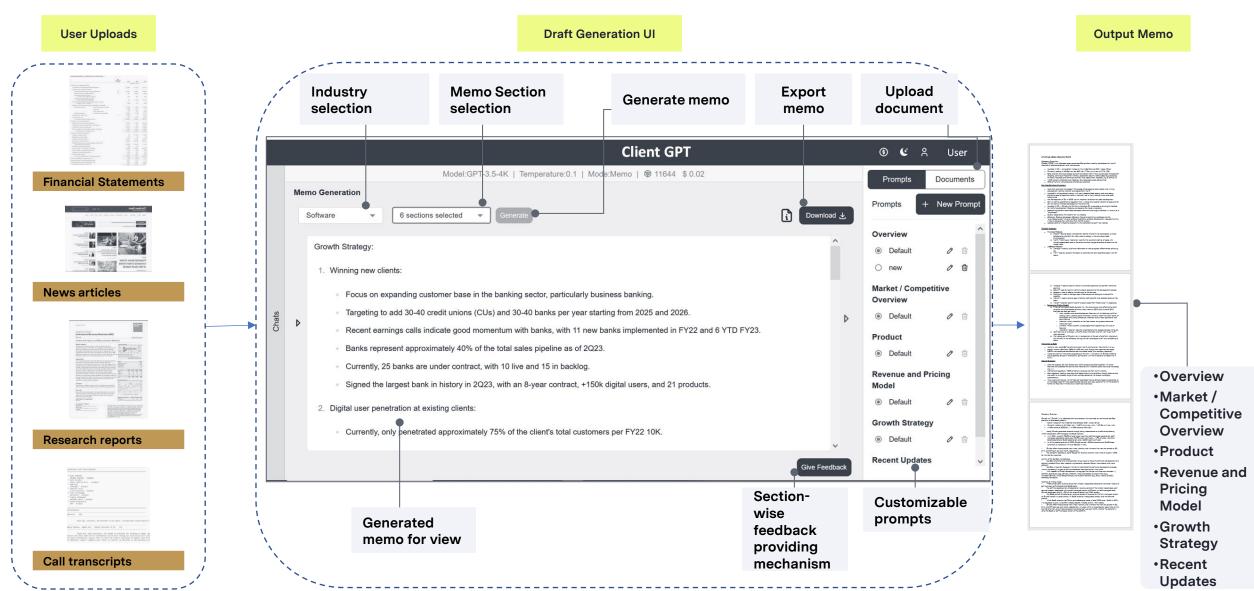
- App service provides vertical and horizontal scalability for the application to meet dynamic user demand
- Cosmos DB is a fast, distributed and scalable NoSQL database and will be used to store chat history
- Lang chain is a software development framework designed to simplify the creation of applications using LLMs

Data is securely transferred between chat bot and app service by SSL/HTTPS secure connections

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Memo generation mode



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Financial summary sample output

Quarterly Financial Data from Valuation Model

	FOR THE THREE MONTHS ENDED			LTM ENDED		
	30-04-2022	31-07-2022	31-10-2022	31-01-2023	LTM 1/31/23	LTM At Acq. (1)
Revenue	\$20.40	\$21.80	\$21.90	\$21.10	\$85.20	\$64.00
% YoY Growth	21.00%	24.40%	16.30%	5.70%	16.40%	41.30%
Recurring Revenue	\$18.90	\$19.80	\$19.60	\$18.70	\$77.10	\$62.60
% YoY Growth	15.30%	15.40%	6.50%	-2.10%	8.40%	39.70%
% Recurring	93.00%	90.80%	89.70%	88.60%	90.50%	97.80%
EBITDA ⁽²⁾	(\$16)	\$13.80	\$11.80	\$10.60	\$52.20	(\$42.30)
% Margin	-78.70%	63.20%	53.80%	50.20%	61.30%	-66.10%
Capex	(\$0.10)	(\$0.10)	\$0.00	\$0.00	(\$0.20)	(\$0.40)
Free Cash Flow ⁽³⁾	(\$16.10)	(\$13.90)	(\$11.80)	\$10.60	\$52.40	(\$42.80)
Net Debt ⁽⁴⁾					\$56.30	\$85.00
Total Enterprise					\$716.70	\$1,200.00
Value					\$/16.70	\$1,200.00
TEV/Rec. Revenue					8.4x	18.7x
Net Debt/Rec. Revenue					N/A	N/A

Pro Forma Net Debt Calc		
Term Loan & Convertible Note	\$250.20	< See 4. Balance Sheet tab
Cash & Cash Equivalents	(\$84.10)	< See 4. Balance Sheet tab
Converted Cash Awards	\$29.10	< See CCA Summary
Net Cash	(\$12.00)	
Net Debt	\$56.30	

AI Generated Financial Summary

Creativity level	Financial Highlights	Comments	
	 Company's LTM 1/31/23 revenue was \$85.2 million, up 16.4% from a year prior. LTM 1/31/23 recurring revenue was \$77.1 million, comprising 90.5% of total revenue. 	Strictly adhering to	
Low	 The Company's EBITDA for the LTM 1/31/23 was \$52.2 million, representing a margin of 61.3%. 		
Low	• The Company's net debt as of 1/31/23 was \$56.3 million. This is calculated as the difference between the term loan and convertible note of \$250.2 million and cash and cash equivalents of \$84.1 million, adjusted for converted cash awards of \$29.1 million and net cash of \$12.0 million.	provided examples	
	The total enterprise value as of 1/31/23 was \$716.7 million.		
	• Company's LTM 1/31/23 revenue was \$85.2 million, a 16.4% increment from the previous year.		
	 The Company's recurring revenue was \$77.1 million, which made up 90.5% of the total revenue and showed an 8.4% YoY growth. 	Exploratory and creative generation to go beyond provided examples	
High	• EBITDA for the same period was \$52.2 million, showing a 61.3% margin. The Company's Free Cash Flow was calculated to be \$52.4 million after a Capex of \$0.2 million.		
9	 As of January 31, 2023, Company had a Net Debt of \$56.3 million. The Net Debt was calculated taking a Term Loan and Convertible Note of \$250.2 million and Cash and Cash equivalents of \$84.1 million into account. The Company also had \$29.1 million in Converted Cash Awards. 		
	The total enterprise value as of LTM 1/31/23 was \$716.7 million. The ratio of total enterprise value to recurring revenue was 8.4x, while the ratio of net debt to recurring revenue was N/A.		

The financial highlights above are generated using OpenAl LLM, leveraging financial data from the valuation model. Utilizing fundamental prompting techniques and adjusting creativity parameters, sample summaries were generated.



7

MS Word Add-in

Based on the first quarter 2023 results announced by Alphabet Inc., the parent company of Google, the performance of Google can be summarized as follows:

- 4 1. Google Services: The revenue accrued from Google Services saw a slight increase, amounting to \$61,961 million, up from the previous year's figure of \$61,472 million. On the other hand, the operating profit experienced a small downturn, falling from \$21,973 million to \$21,737 million.
 - Google Cloud: The revenue for Google Cloud saw a significant increase from \$5,821 million to \$7,454 million.
 The operating income also turned positive, from a loss of \$706 million to a profit of \$191 million.
 - Other Bets: The revenue for Other Bets decreased from \$440 million to \$288 million. The operating loss also decreased from \$835 million to \$1,225 million.
 - Total Revenues and Income: The total revenues increased from \$68,011 million to \$69,787 million. However, the total income from operations decreased from \$20,094 million to \$17,415 million.

Here is a tabular representation of the data:

68,011

Total

₽					
	Segment	Revenue Q1 2022 (in million \$)	Revenue Q1 2023 (in million \$)	Operating Income Q1 2022 (in million \$)	Operating Income Q1 2023 (in million \$)
	Google Services	61,472	61,961	21,973	21,737
	Google Cloud	5,821	7,454	(706)	191
	Other Bets	440	288	(835)	(1,225)

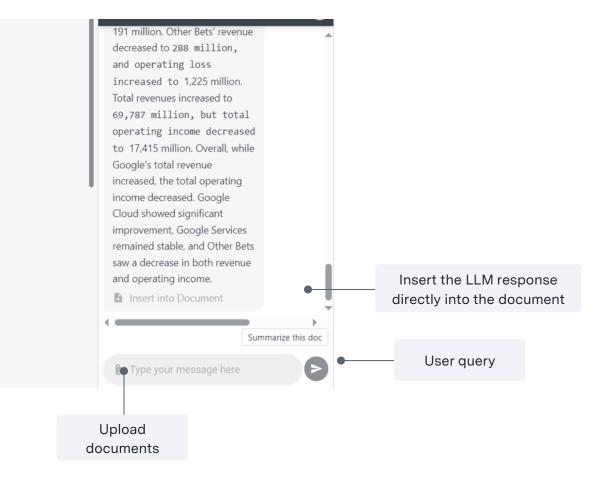
69,787

In conclusion, while Google's total revenue has increased, the total operating income has decreased in Q1 2023 compared to Q1 2022. The Google Cloud segment has shown significant improvement, while the Google Services

20,094

17,415

Well formatted LLM response along with tables is directly inserted into the document



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