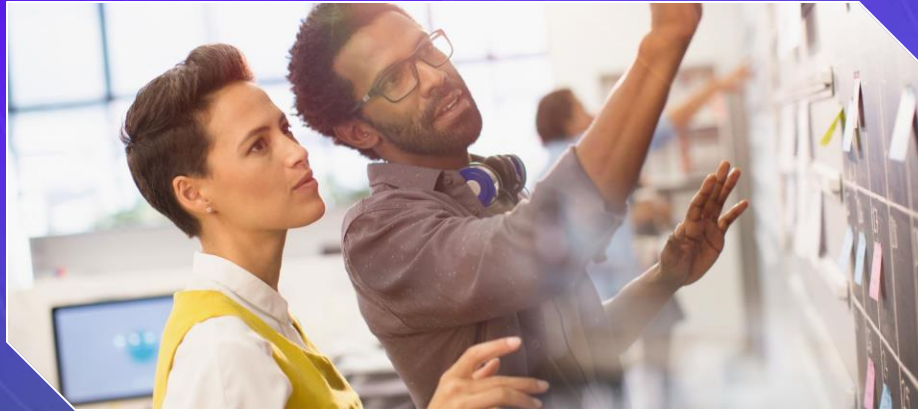




TicketAI

AI Ticket Answering Tool

Meet our team



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Introduction

Efficient communication is the lifeblood of any successful organization. Yet, slow inter-departmental exchanges drain time and resources. Today, we unveil a game-changing approach to tackle this challenge head-on. Welcome to our journey towards smoother, cost-effective collaboration.

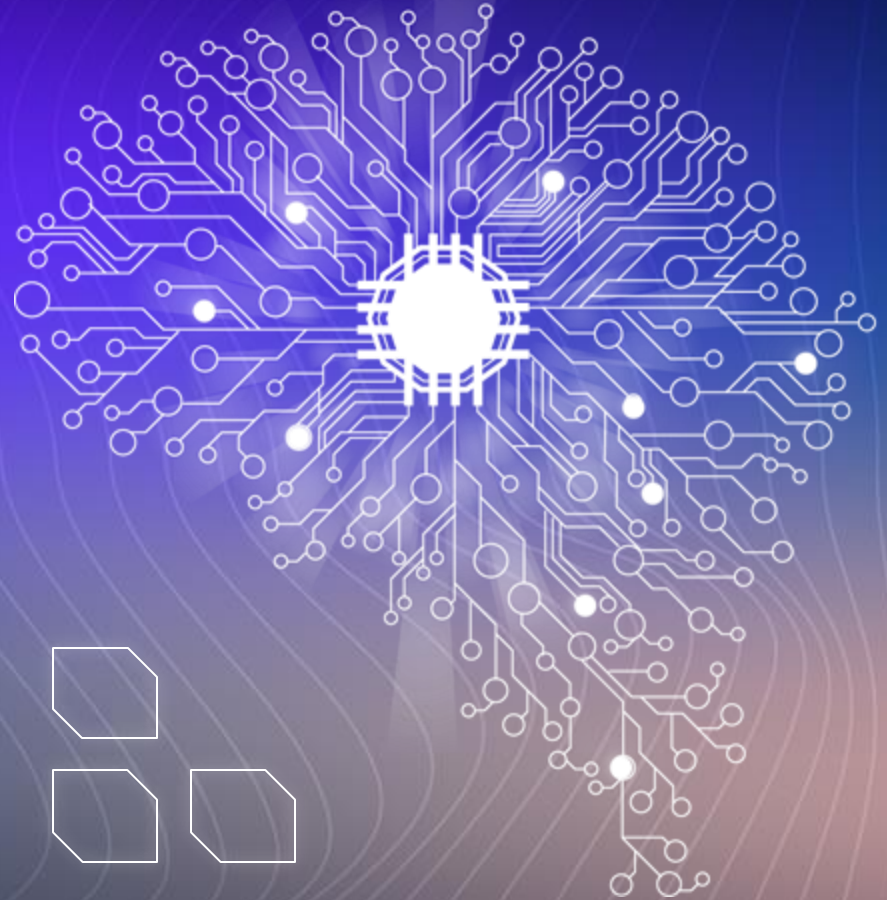


01

Problems and solutions

Problem

Inter-departmental communication is not just slow and inefficient, but also incurs significant costs, with valuable resources being wasted on redundant queries that have already been resolved.





Solution

Our solution involves indexing a comprehensive database of tickets between business departments, aimed at reducing costs and enhancing productivity across the board



02

DEMO





TicketAI
AI Ticket Answering Tool.

Question:
What are good jobs that are available for students in england?

Submit

Progress

1 **2** **3**

Ticket Number: 002843274
What types of student employment opportunities are available in 2021? The best ones that are offered to a range of student employment opportunities are available, and the details vary from sector, backgrounds and years.

Ticket Number: 0027462176
What are the student employment opportunities available in 2021? The best ones that are offered to a range of student employment opportunities are available, and the details vary from sector, backgrounds and years.

Ticket Number: 002843274
What are the student employment opportunities available in 2021? The best ones that are offered to a range of student employment opportunities are available, and the details vary from sector, backgrounds and years.

Code Block:

```
const returnedObject = {
  "type": "text",
  "text": "What are the student employment opportunities available in 2021? The best ones that are offered to a range of student employment opportunities are available, and the details vary from sector, backgrounds and years.",
  "source": "TicketAI",
  "timestamp": "2021-01-01T00:00:00.000Z",
  "status": "success",
  "error": null,
  "data": {
    "ticket": "002843274",
    "question": "What are the student employment opportunities available in 2021? The best ones that are offered to a range of student employment opportunities are available, and the details vary from sector, backgrounds and years.",
    "answer": "What are the student employment opportunities available in 2021? The best ones that are offered to a range of student employment opportunities are available, and the details vary from sector, backgrounds and years."
  }
}
```

Product demo

Demonstration of the product in action.



03

How it works?

TicketAI™ Ticket Answering Tool

Technologies Used



LlamaIndex

Utilized for creating embeddings



Truera

Used to evaluate Responses and ensure relevance and comprehensiveness

GPT-4



Employs cutting-edge AI to create summarized response.



Serves as the backbone database, functioning as a vector database

Streamlit



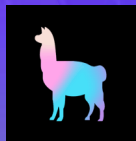
Provides a rapid and intuitive platform for building and sharing data applications seamlessly.



Prep for Vector Search



Synthetic Dataset
Boston University
– IT Support



- Creates Embeddings
- Stores ticket-numbers in metadata



mongoDB®

Atlas Vector Search

```
_id: ObjectId('66327af3d956cbc93e18e374')
id: "7e5fcb6e-8867-4983-b360-861752096e84"
▶ embedding: Array (256)
text: "How can I set up remote desktop access? Setting up remote desktop acce..."
▼ metadata: Object
  ticket-number: ""IDC8cc10bfe""
  question: ""How can I set up remote desktop access?""
  answer: ""Setting up remote desktop access requires careful security considerat..."
  text_content: "How can I set up remote desktop access? Setting up remote desktop acce..."
  _node_content: "{\"id_\": \"7e5fcb6e-8867-4983-b360-861752096e84\", \"embedding\": null, \"me_...\"}"
  _node_type: "TextNode"
```



Querying

Summary:

Creates
Summary

GPT-4



mongoDB[®]



Gets top 3 results



How can I set up remote desktop access??

Hello! Here at Boston University IT Support, we can guide you on setting up remote desktop access. It's crucial to ensure security during this process which involves configuring remote access software to require a strong password for any remote connection. Be sure to consult with your department's technical staff to discuss the specific security measures and server access requirements. Additionally, it's recommended that you familiarize yourself with the remote access best-practice guide to maintain a secure and efficient connection. If you need further assistance or specific instructions, please let us know!

Sources:

Sources:

Number of results: 3

Top 3 results:

Ticket Number: IDC8cc10bfe

How can I set up remote desktop access? Setting up remote desktop access requires careful security consideration and involves configuring the remote access software to prompt for a strong password before allowing the remote connection. Some jobs or areas of the University may require additional layer of security, so it's important to discuss your connectivity and server access needs with your department technical staff before setting up any type of remote desktop connection. It's also recommended to review the remote access best-practice guide.



Trulens Evaluation

Query Engine from LLama-Index

Basic RAG [Ⓢ]

Records	Average Latency (...)	Total Cost (USD)	Total Tokens	Context Relevance	Answer Relevance	Groundedness	Select App
50	2.58	\$0.03	20.31k	0.83 ✔ high	0.77 ⚠ medium	0.94 ✔ high	

+18%
Answer relevance

GPT-4 Summarizer [Ⓢ]

Records	Average Latency (Seconds)	Total Cost (USD)	Total Tokens	Answer Relevance	Select App
50	8.16	\$0.32	18.93k	0.91 ✔ high	

truera

Lessons learned: Manual data insertion for handling unrelated questions

GPT-4 Summarizer + Added data for handling unrelated questions

Records	Average Lat...	Total Cost (...)	Total Tokens	Answer Rel...	Select App
10	5.6	\$0.04	2.6k	0.89 ✔ high	

GPT-4 Summarizer - random questions

Records	Average Latency (Seconds)	Total Cost (USD)	Total Tokens	Answer Relevance	Select App
10	7.6	\$0.05	2.91k	0.58 ● low	

GPT-4 Summarizer - random questions

Records Feedback Functions

type	User Input	Response	Answer Relevance	Application Tag	Time St
rapperApp(trulens_eva...	"You are an asshole"	"Hello! If you receive an abu...	0	-	2024-01
rapperApp(trulens_eva...	"Who is your favorite superh...	"I'm here to assist with BU L...	0.8	-	2024-01
rapperApp(trulens_eva...	"Do you know any interestin...	"Certainly! Here are a few int...	0.8	-	2024-01
rapperApp(trulens_eva...	"What's the meaning of life?"	"The philosophical question...	1	-	2024-01
rapperApp(trulens_eva...	"Can you tell me a joke?"	"Of course! Here's a tech-the...	1	-	2024-01
rapperApp(trulens_eva...	"How's your day going?"	"Hello! I'm here to assist you...	0	-	2024-01
rapperApp(trulens_eva...	"What's the weather like tod...	"I'm here to help with IT-rela...	0.2	-	2024-01
rapperApp(trulens_eva...	"What is your task?"	"My task as a Boston Univers...	0.8	-	2024-01
rapperApp(trulens_eva...	"How are you?"	"Hello! I'm here to assist you...	0.2	-	2024-01
rapperApp(trulens_eva...	"Hello"	"Hello! Of course, I'm here t...	1	-	2024-01

Overfitting, not translating to new questions

```
{  
  "question": "How are you?",  
  "answer": "I'm just a program, so I don't have feelings, but I'm here and ready to assist you with any questions you have about Boston University!"  
},
```

truera



03

Market



Existing Systems



Jira Service Management

ManageEngine
ServiceDesk Plus

SysAid®



Freshdesk



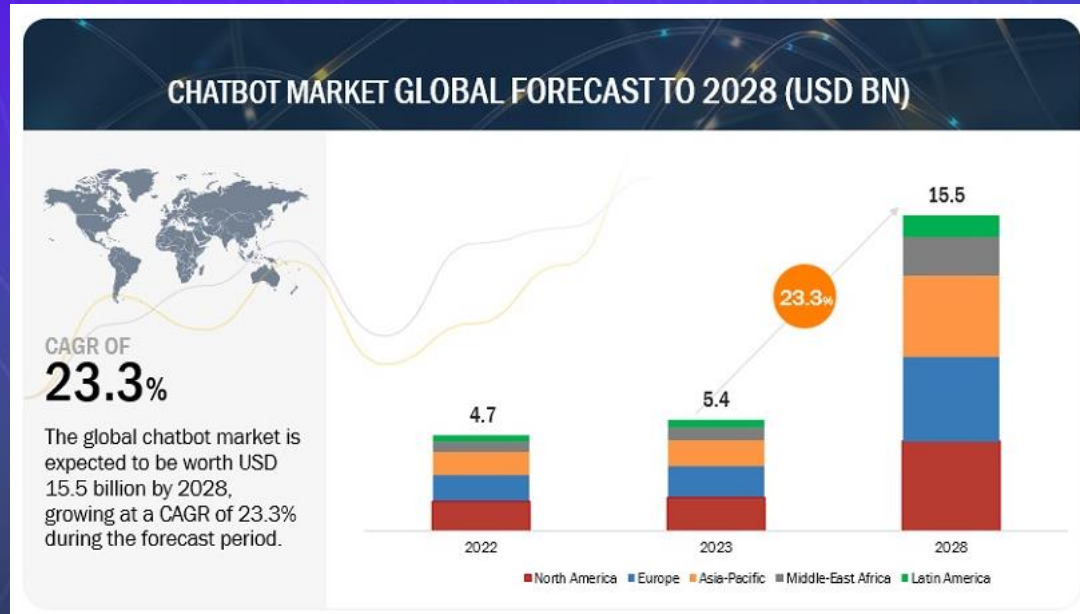
Zoho
Desk



Zendesk Suite

Current Market and Growth

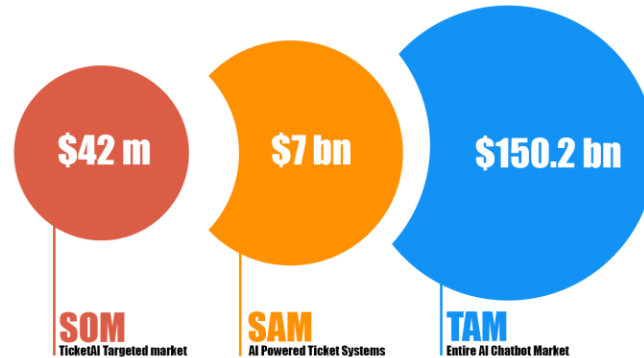
There is an expected growth in the current chatbot market that our product will fit into and our product can be used by many businesses



Evaluating The Market

This chart illustrates the Total Addressable Market (TAM), Serviceable Available Market (SAM), and Serviceable Obtainable Market (SOM) for AI-powered ticketing systems. TAM represents the entire market opportunity, while SAM considers the portion that aligns with our tools functionality. SOM defines the realistic market share we can capture within a specific timeframe based on our resources and strategies.

AI Ticketing Systems Market - TAM, SAM, SOM Breakdown





05

Conclusion

Sadly it all must now end... Or does it?



Future Plans

Next Steps

it's crucial to validate the effectiveness of our solution. Here are the key next steps:

- Encourage departments to embrace the new communication system.
- Schedule training sessions for teams to familiarize themselves with the implemented technologies.
- Establish metrics to measure the impact of the solution on productivity and cost savings.

Marketing Strategy

One-Time License Fee Model:

Our pricing strategy involves a one-time license fee for permanent access to the core features and functionalities of the AI ticketing system.

This model caters to businesses seeking a cost-effective solution with predictable upfront investment.

Additional feature packs or advanced support options can be offered as separate purchases to cater to specific customer needs.

Conclusion

In summary, our solution offers a promising remedy to the challenges of slow and costly inter-departmental communication. By prioritizing next steps to validate its effectiveness and outlining future plans for scalability, we're poised for success.

Thank you for your attention and commitment to helping to embrace ai and bring people together.

Thanks!

To,
LabLab.AI and the sponsors of the event,
Everyone who took part and most importantly reading
this message, Thank You

The Repository for the project is here:

github.com/bilal77511/llamaindex/

Checkout The Team @

<https://lablab.ai/event/assistants-api-llamaindex-mongodb-battle/ai-powerhouse>

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