Generative AI-Based Multilingual Tools for Enhancing Library Reference and Information Services

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***Abstract*—The main motto of libraries is to serve as global knowledge hubs that providing equitable access to information for all overcoming the barrier of language. The linguistic diversity cause of a significant systemic barrier for information dissemination services, particularly in linguistically diverse country like India. While dominant models like ChatGPT, Deepseek, Google Gemini etc are widely discussed in everywhere, this study explores an alternative, specialized landscape of some other Multilingual AI based tools and Large Language Model (LLM) applications designed to overcome language barriers in library services. This study employs an exploratory literature review methodology. Data and operational insights were systematically collected from academic databases (Scopus, Google Scholar), national and international journals, and the official website for technical documentation of various AI platforms. The study explores the diverse landscape of specialized some multilingual AI tools. The study also provides some suggestion for multilingual AI tools users.**

***Index Terms*—Generative Artificial Intelligence (GenAI), Multilingual AI Tools, Library Reference Services, Information Dissemination**

I. INTRODUCTION

The main mottos of Libraries are to serve as knowledge hubs that support teaching, learning, research activities and to disseminate information for all. Above that reference services constitute one of the core functions of libraries, to assist users in locating, evaluating, and utilizing information resources effectively. In digital era libraries has led to the adoption of various technologies aimed at improving service quality and accessibility. Here the impact of AI in library services has the complete scenario. As AI is sitting in the driving position for all the field, library reference services also developing faster for user service. But in case of country like India the language diversity is one hindrance in reference services. But use of AI based multilingual tools overcomes from this kind of hindrance. This paper will explore different AI based multilingual tools (other than Google Gemini, ChatGPT and deepseek) which enhance the library reference and information services.

II. LITERATURE REVIEW

Multilingual AI tools matter for modern library service because today, service is global by default. Libraries need to meet users and library staff on any channel, at any time, in their preferred language. Instead of just pulling data from data bank and translating it, multilingual AI tools can understand context, adapt to requests, and take action to fulfill the user's demand. This means when a information seekers requests for any document or information, a multilingual agent can understand the issue, process the refund, and produce the same. The multilingual AI tools deeply integrate into the service platform. They connect knowledge, workflows, and service data so the library can disseminate information in more accurate, scalable support.

Generative AI has been most discussed topic within library and information science literature. Pre AI applications focused on expert systems, information retrieval algorithms, and recommendation systems. But Recent developments in machine learning and natural language processing have accelerated the adoption of Generative AI-driven services in libraries. Recent advancements in Generative AI, particularly in Large Language Models (LLMs), have introduced new possibilities for Library Services. These systems can understand natural language queries, generate human-like responses, translate content, and provide personalized recommendations. As a result, the generative AI act as catalyst in enhancing library services for divers of multilingual users (Tamilselvan, 2025).

The Language barrier is one of the prime hindrances for library services. Earlier to overcome language barriers in information retrieval relied on dictionary-based translations, which struggled significantly with contextual accuracy (Michos et al., 1999). However, recent breakthroughs in generative artificial intelligence (GenAI) and large language models (LLMs) have triggered a profound tremendous shift in dissemination of information and it moving from literal, keyword-matching databases to dynamic, intelligent, and context-aware question-answering systems. In Library and information services, generative AI tools act as critical catalysts for democratizing access which eliminating systemic communication barriers. Due to the impact of AI the natural language processing (NLP), advanced generative tools now support continuous, 24/7 multilingual conversational interfaces, real-time index generation, and cross-lingual catalog translation (Shantha, 2024).

According to Venumadhav (2026) AI-powered translation make easier to serve increasingly diverse user populations by providing reference services in multiple languages, which breaking down linguistic barriers to information access. He also writes that neural machine translation systems enable to create catalog records in multiple languages, supporting international research collaboration and diverse user communities.

III. METHODOLOGY

This study is based on exploratory literature review. The facts are collected by a systematic study from Scopus, Google Scholar, other national and international journals, and some official websites of different AI tools and organizations. To meet the objective of the study the author used constant readings of documents related to artificial intelligence, multilingual tools and tried to find different AI tools which may helps in library services to overcome language barrier. Some ideas were taken from the practical field by using some multilingual AI tools and tried to merge in library services for disseminate information in different language. The author also tried to find pros and cons of those multilingual AI tools after using in library services. After collecting ideas from different sources author tried to fulfill the aims of the study.

IV. OBJECTIVE OF THE STUDY

Generative AI has played a great role in overcoming the language barriers. So, keeping base of this philosophy the objectives of the study are mentioned below:

1) To find out some Multilingual AI tools which can help in information Dissemination.
2) To find how AI based Multilingual tools can enhance library and information services.
3) To find the changes in using AI based multilingual tools in library services.
4) To find how information seeker can be benefited from AI based multilingual tools.

V. AI-POWERED MULTILINGUAL TOOLS: CURRENT LANDSCAPE

Multilingual AI tools can understand and respond to people in multiple languages. Think of it like a virtual assistant that responds in many languages fluently and can switch between them without skipping any step. Instead of converting words from one language to another, multilingual AI tools can understand the meaning behind what someone's requirement. It picks up on context, intent, and cultural nuances so the conversation actually feels natural. No awkward, robotic phrasing.

The work flow behind the performance of multilingual AI tools as follows, when an information seeker reaches out, whether by phone, chat, or text, the AI detects the language they're using. Then it processes the message using natural language processing to figure out what that person actually needs. From there, it generates a response in that same language, all in real time. We can find multilingual AI tools in a few different forms other then library services. Some multilingual AI platforms power chatbots on websites. Others answer phone calls as virtual receptionists. And some work across multiple channels like social media, messaging apps, and email all at once. But these services can relate with library services directly or indirectly. Some examples of different multilingual AI tools which can use in library services are discuses bellow: -

5.1 YesChat

Preparing a glossary is one of the most time-consuming steps in translation and interpreting for

work. YesChat helps streamline this process by automatically identifying domain-specific terminology from documents, web pages, or pasted text. This makes faster service for a library to disseminate information. Basically, it is useful for translators who need to quickly identify terminology and possible equivalents in different languages. But it can also use in library services to provide information in different languages.

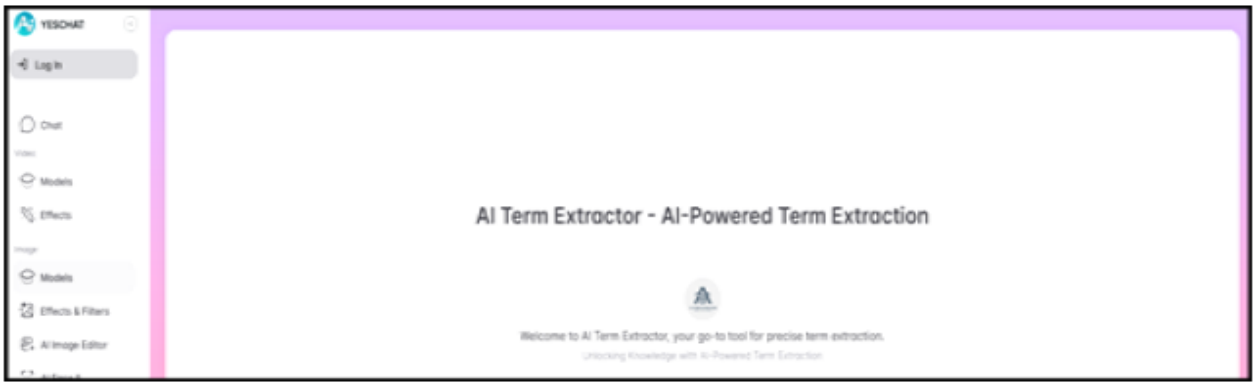


Image 1. Home page of YesChat AI

5.2 Upfirst

It is a multilingual AI app basically for mobile phone to answering service in different languages. It picks up calls in the caller's language, takes messages, answers common questions, and sends a summary after every call to the user. It works like having a multilingual information provider. it supports more than 35 languages including Spanish, French, Mandarin, and Russian. So, a library can disseminate information in different languages with the help of this multilingual AI apps

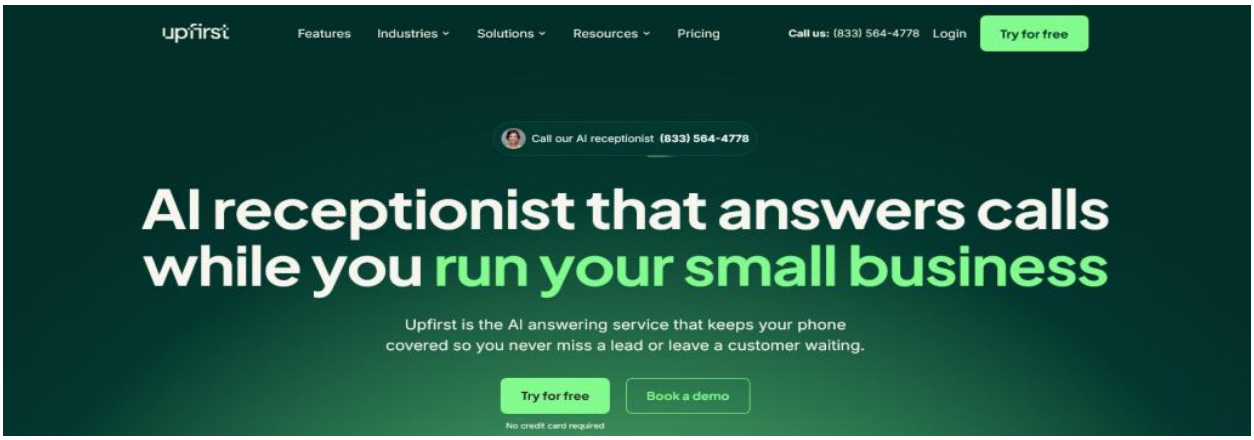


Image 2. Home page of Upfirst

5.3 Zendesk

This is built for the organizations that want AI to do more than answer questions in different languages. Zendesk AI is deeply integrated into the service platform, connecting knowledge, workflows, users' data in one place. Main advantage of Zendesk is that it enables unified approach, with auto generated replies in up to 80 languages from knowledge-grounded answers connected to trusted sources. This feature makes Zendesk the strongest fit for unified AI-powered resolutions across multiple languages. Zendesk gathers broad language support with native intelligence, governance, and service orchestration in a single platform.

The main benefits for users of the tool highlight the practical benefits: faster and more efficient information handling, less repetitive manual work through automation. These advantages make different Zendesk's value for libraries that need scalable, multilingual user without adding complexity.

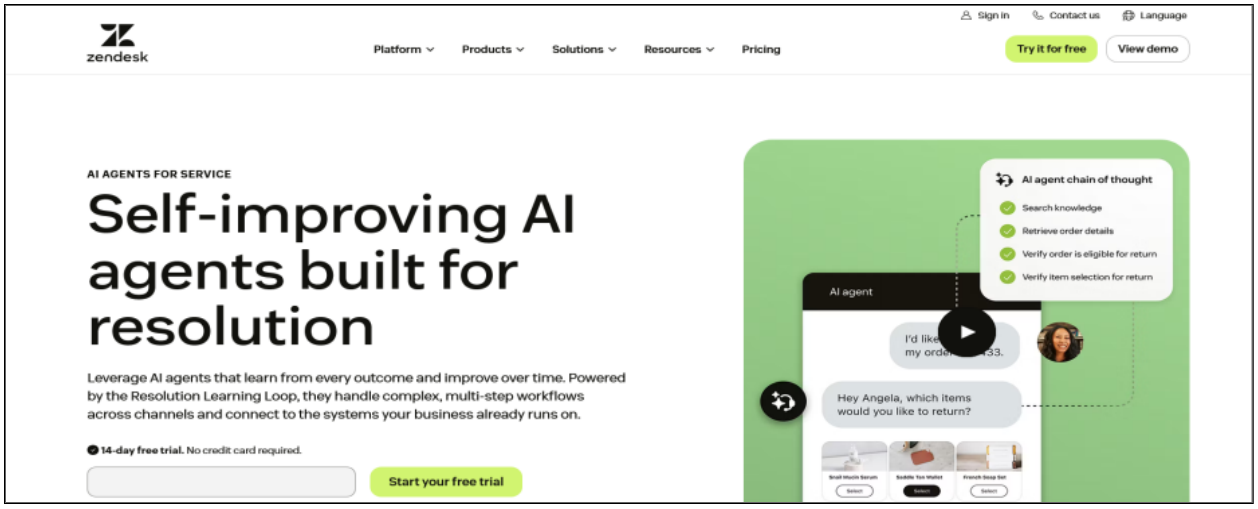


Image 3. Home page of Zendesk

5.4 Cavya.ai

It is a useful Document Analyzer that provides a structured and very thorough analysis of a document for translation. In addition to document analysis, Cavya can automatically generate context-rich glossaries and style guides depending to the document type, audience, and target language. These resources help library users to get required information in different languages.

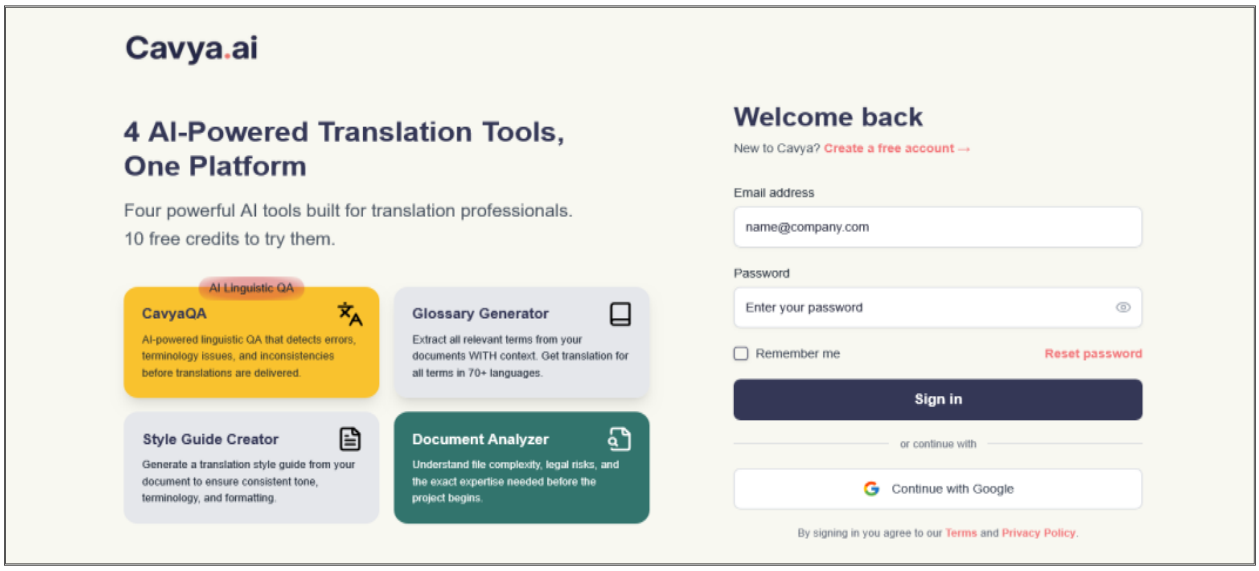


Image 4. Home page of Cavya.AI

5.5 Yellow.ai

This is an enterprise-grade multilingual conversational AI platform which has one of the biggest language libraries out there. It powers AI chatbots and voice assistants across multiple channels for information dissemination that need wide language coverage. It supports

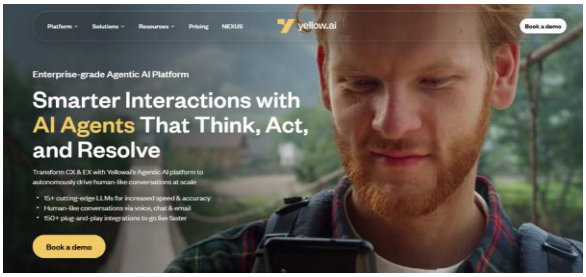


Image 5. Home page of Yellow.ai

5.6 LanguageTool

This is an AI-powered writing assistant AI tools designed to help users proofread and refine texts across multiple languages. This can use for library services to disseminate information from different language source. With the help of this tool a user can goes beyond basic spell checking by identifying grammar, punctuation, and style issues also. It can analyze the meaning of sentences and provide context-aware corrections. One of LanguageTool's main advantages is its multilingual support, offering grammar and style checking for 30 + languages and dialects. LanguageTool also includes features such as AI-powered paraphrasing, synonym suggestions, and real-time editing feedback, helping linguists improve readability and avoid repetitive wording.

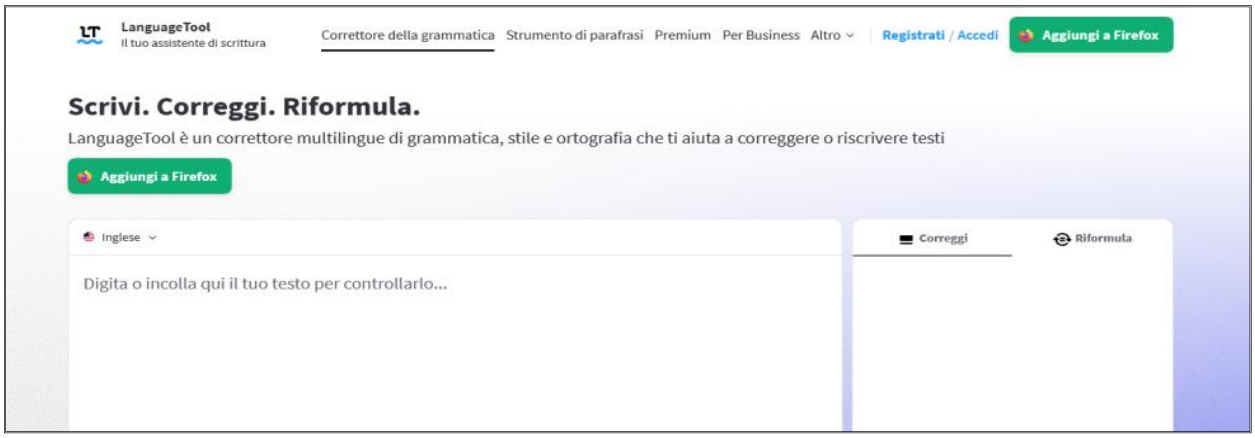


Image 6. Home page of LanguageTool

5.7 Dialogflow

This is Google's multilingual conversational AI platform. This is a developer-friendly multilingual chatbots and voice agents which can be use in any organization. So, any library can develop chatbots or other services with the help of Dialogflow AI for their libraries according to the needs. This support more than 50 languages. So, it is easier to serve for a library to different document in multilingual forms.

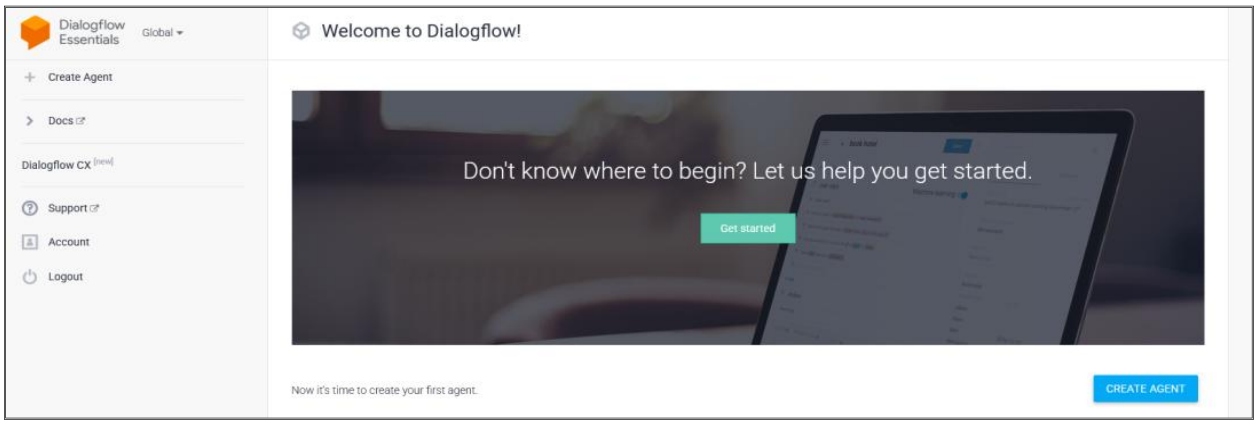


Image 7. Home page of Dialogflow

5.8 HeyGen

This is an AI-powered platform that allows users to create professional videos using voice generation, and automated translation tools, making it particularly useful for multilingual content creation. It also supports video translation and dubbing in more than 175 languages. For translators and localization professionals, this type of tool is particularly valuable in audiovisual localization and multilingual communication.

A library can use this kind of AI tools to create video clipping to promote their services or to disseminate current information to the users in different languages.

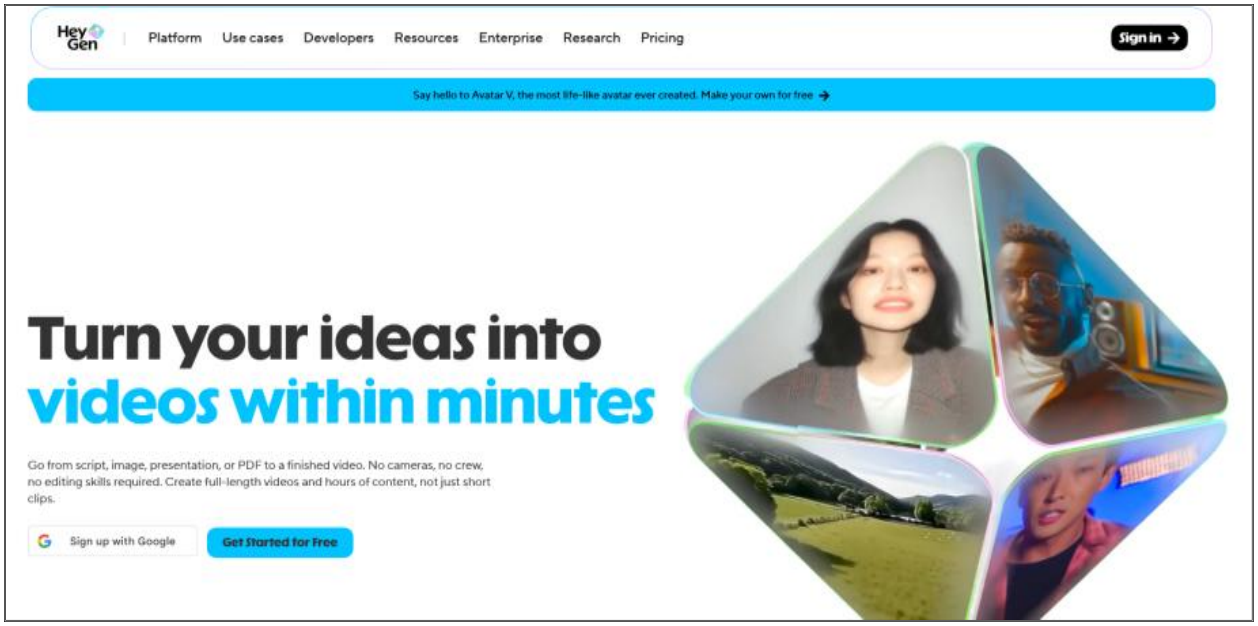


Image 8. Home page of HeyGen

5.9 Chatbase

It is a no-code AI chatbot builder by which a library can create a multilingual chatbot for their website to serve as smart librarian. Library can update it on their own content, like web pages and documents, and it can be live in minutes. After using it in the library by putting off adding a chatbot because it sounds too technical, this is a good place to start. Chatbase supports more than 80 languages thus it works as multilingual solution for library services.

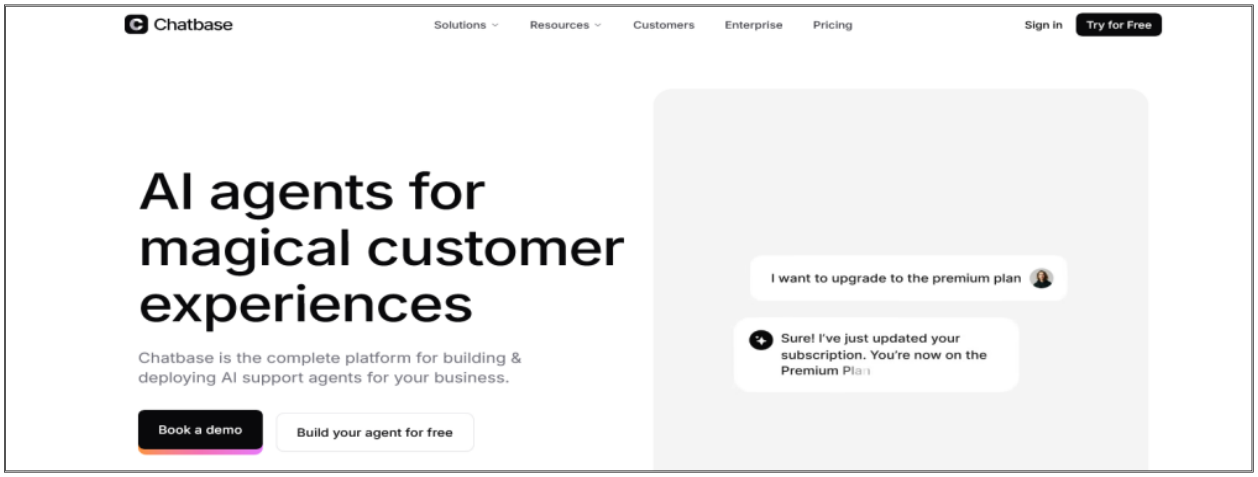


Image 9. Home page of Chatbase

5.10 Claud AI

This is an indispensable tool for translators, interpreters, and language professionals. Unlike traditional machine translation engines, these AI models act as versatile linguistic assistants, capable of understanding context, extracting terminology, summarizing content, and supporting creative or technical writing tasks.

So, in library services we can use ClaudAI to translate information in different languages. Any library can modify their service in multilingual form.

Information seeker may want information in their own language but the original information may have in other languages. So, this kind of AI tools helps in library services to serve information in many languages.

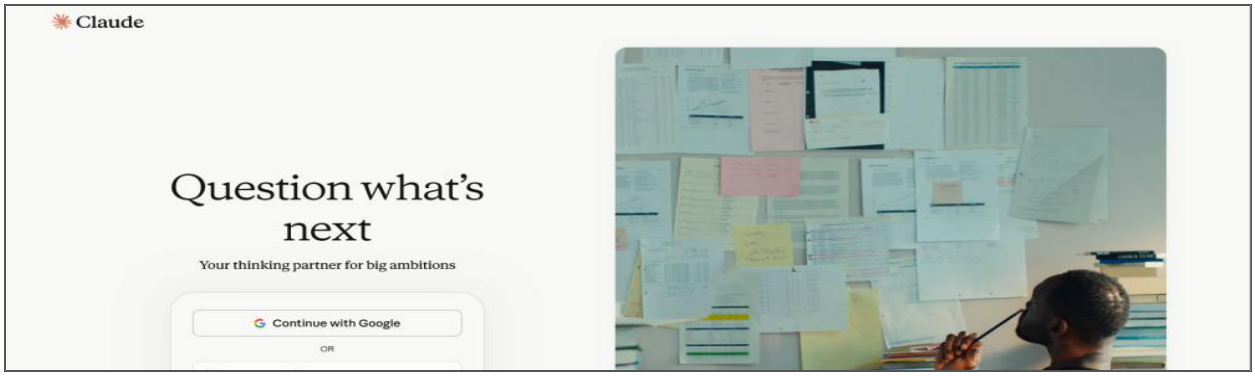


Image 10. Home page of Claud AI

5.11 Tidio

It is a live chat and multilingual chatbot platform that brings human agents and AI together in one tool. Any library can use this tool as virtual assistant of their library. This is also a multilingual AI tools which can work more than 48 languages in all over the world like Spanish, French, German etc. It can help a library in real-time live chat alongside automated AI responses.

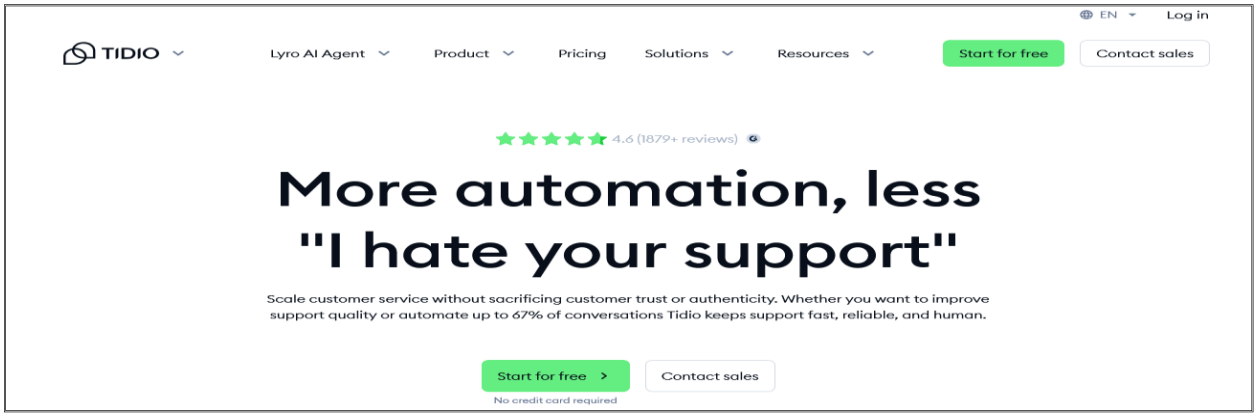


Image 11. Home page of Tidio

5.12 DeepL

It is one of the most widely used most accurate AI translators' engines among professional translators and language experts. It uses advanced neural networks to capture subtle linguistic nuances which other tools may miss. It allows users to set specific glossaries (ensuring particular library terminology) and switch between formal and informal tones depending on the target user. Thus, any library can disseminate information in multi language according to the demand of their user.

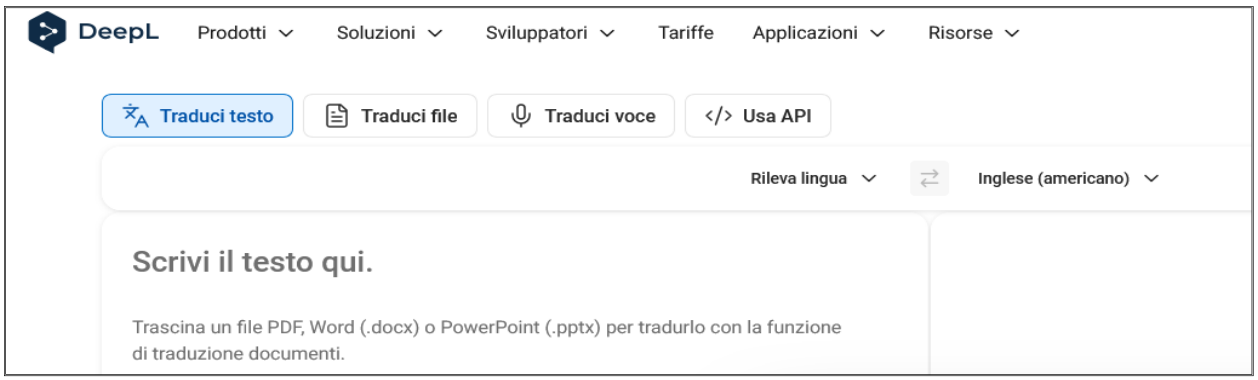


Image 12. Home page of DeepL

VI. ADVANTAGES

Due to the explosion of information in different languages it is very difficult to serve proper information to user in right languages. But today in AI era it is easier to serve any information in any languages without language barrier.

The integration of multilingual AI tools into library services are helping to serve right information to in right language faster and more efficiently. In an increasingly globalized world, libraries must serve diverse populations, and AI-driven language processing helps bridge critical communication and accessibility gaps.

The primary advantages of utilizing multilingual AI tools in modern library services discussed below:

1) Traditional libraries are often bound by the language proficiencies of their available staff or local geographic constraints. Non-native speakers or international researchers gain immediate, independent access to the library's entire physical and digital collection, regardless of their native tongue.
2) A multilingual AI tool elevates how staff interacts with users daily. AI-powered chatbots can handle routine inquiries around the clock in dozens of languages simultaneously.
3) Real-time speech-to-text and text-to-speech AI tools enable librarians to seamlessly communicate with non-native speakers face-to-face, avoiding frustration or awkward translation delays.
4) Traditional cataloging heavily relies on matching exact word strings. But multilingual AI introduces contextual understanding. User can input queries using conversational, local language, and the AI can infer intent, retrieving as per required foreign-language materials that match the concept. A researcher can type a search query in Spanish, and the AI can sift through, surface, and summarize highly niche academic papers written in Mandarin, English, or German.
5) In libraries having less chance to appoint any full-time, multilingual translators for every language demographic is financially unsustainable for most public and academic institutions. But Multilingual AI automates the heavy lifting of language processing, enabling libraries to stretch with minimum budgets. Hence the use of multilingual A tools is very cost effective and libraries can adopt easily.

VII. LIMITATIONS AND CHALLENGES

In adopting the multilingual AI tools in library services, we must have considered some limitations and challenge. Some are discussed below:

1) While multilingual AI tools exhibit high proficiency in high-resource languages like English, French, Spanish etc, their performance drops precipitously when processing low-resource, regional, or indigenous languages due to a lack of representative training data. In library service context, this disparity manifests as semantic degradation, syntax errors, and a chance to misinterpretation for non-Western queries. This structural limitation creates an uneven tier of service quality, inadvertently penalizing patrons from diverse linguistic backgrounds and undermining the library's mission to provide equitable access to information.
2) Within multilingual AI based reference services, the challenge is amplified as the AI may translate a legitimate query accurately but respond with non-existent localized metadata, phantom citations, or structured bibliographies. So, there is a chance to disseminate wrong information with the help of this kind of AI based multilingual tools.
3) The generative AI systems often approach translation mechanically, struggling with localized idioms, shifting historical vernacular, and specialized academic jargon. Thus, sometime user may misguide by multilingual tools, because they translate in word by word without understand the meaning. There are some words which has different meaning with their uses. Some time the word has other meaning if it used in single word and some time it may has different meaning when it used in Phrase and idioms. But the AI doesn't understand it and chance to provide wrong information to the user.
4) The development of multilingual LLMs relies heavily on the unauthorized ingestion of copyrighted literature, localized digital repositories, and proprietary academic translations without explicit consent, fair compensation, or attribution to human scholars and translators. By using these tools to synthesize reference answers without clear

citation paths, libraries may face risk becoming complicit in extractive digital practices. This raises profound ethical concerns regarding copyright integrity and academic fair use, challenging the library's mandate to serve as a principled guardian of intellectual property.

VIII. SUGGESTION

There are no single tools which we can say as best for library services. The choice is based on the specific needs of services. Some Criteria to choose right multilingual AI Tools for library services are discussed below

1) Different Channel

Depending on the use of AI tools in what kind of Channel the libraries are going to use can choose different AI tool. The reference librarian mostly missing phone calls from non-English speakers. A voice-first platform like up first is the way to go. If the library needs a multilingual chatbot for website then Chatbase or Tidio are built for that. If libraries want to cover social media, email, and everything in between then Freshchat or Yellow.ai may be the best option.

2) Users' language

The basic criteria to choose multilingual AI tools is depending on the user's language. If users are mainly speaking Spanish and English, then the library don't need a platform that supports 135 languages. Focus on quality in the languages that matter to library services rather than chasing the biggest number.

3) Budget

If the library is having a limited budget, then platforms like Upfirst, Tidio, and Freshchat offer affordable starting points. Because this kind of AI tools can afford by library with a very minimum of expenditure. If the Libraries are having a good budget to work with, then the library can adopt multilingual AI tools like Yellow.ai and Dialogflow etc.

4) Skill Manpower

Before adopting any AI tools in library service, we have to keep in mind that what kind of manpower is working in that particular library. Like if there is no software developer is working in library then it will very difficult to adopt any kind of AI tools. Then the library may choose with no-code options like Upfirst, Chatbase, Tidio, or Freshchat. If the libraries are having good technical staff with software developer or other expert then the library can adopt Botpress and Dialogflow AI tools which offer more customization.

IX. CONCLUSION

Todays in AI era the modern libraries to transform from localized repositories into globally accessible, equitable knowledge hubs have a tremendous change in Library services. This study demonstrates, the integration of AI-powered multilingual tools excluding traditional models like ChatGPT, Google Gemini, and DeepSeek, which already serves as a critical catalyst for enhancing reference and information services globally. This study explores some other AI driven tools which works on in Natural Language Processing (NLP) and machine learning, platforms such as YesChat, Zendesk, Chatbase, and DeepL. These are systematically dismantling long-standing linguistic barriers. These platforms shift library reference frameworks from rigid keyword-matching operations to context-aware, 24/7 localized user interactions. The exploratory review found that the implementation of these multilingual AI Tools yields significant operational advantages. It enhanced use of foreign-language collections, multi-channel user engagement, cost-effective scaling for resource-constrained Libraries, and culturally sensitive information retrieval. Again, these benefits are bounded by profound operational challenges. The systemic performance degradation in low-resource regional languages, the risk of virtual metadata, and complex ethical dilemmas surrounding copyright integrity and unauthorized data ingestion represent critical friction points that public and academic libraries must navigate. Ultimately, this study concludes that there is no singular, universal multilingual AI solution for library services. Successful deployment demands a strategic, multi-criteria alignment that weighs communication channels, target user demographics, fiscal boundaries, and the technical skill levels of existing library manpower. Libraries must adopt a balanced, human-in-the-loop paradigm wherein no-code platforms or highly customizable developer suites are carefully implemented to augment, rather than replace, the critical oversight of professional information

specialists. Future research should focus on empirical, field-based testing of these individual tools to map their long-term efficacy and impact on user satisfaction within diverse, real-world academic ecosystems. Such advancements will ensure that libraries continue to sustainably fulfill their timeless motto: providing the right information, to the right user, in the right language, at the right time.

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