ECOMMERCE Assistant

LablabAI Hackathon

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Summary

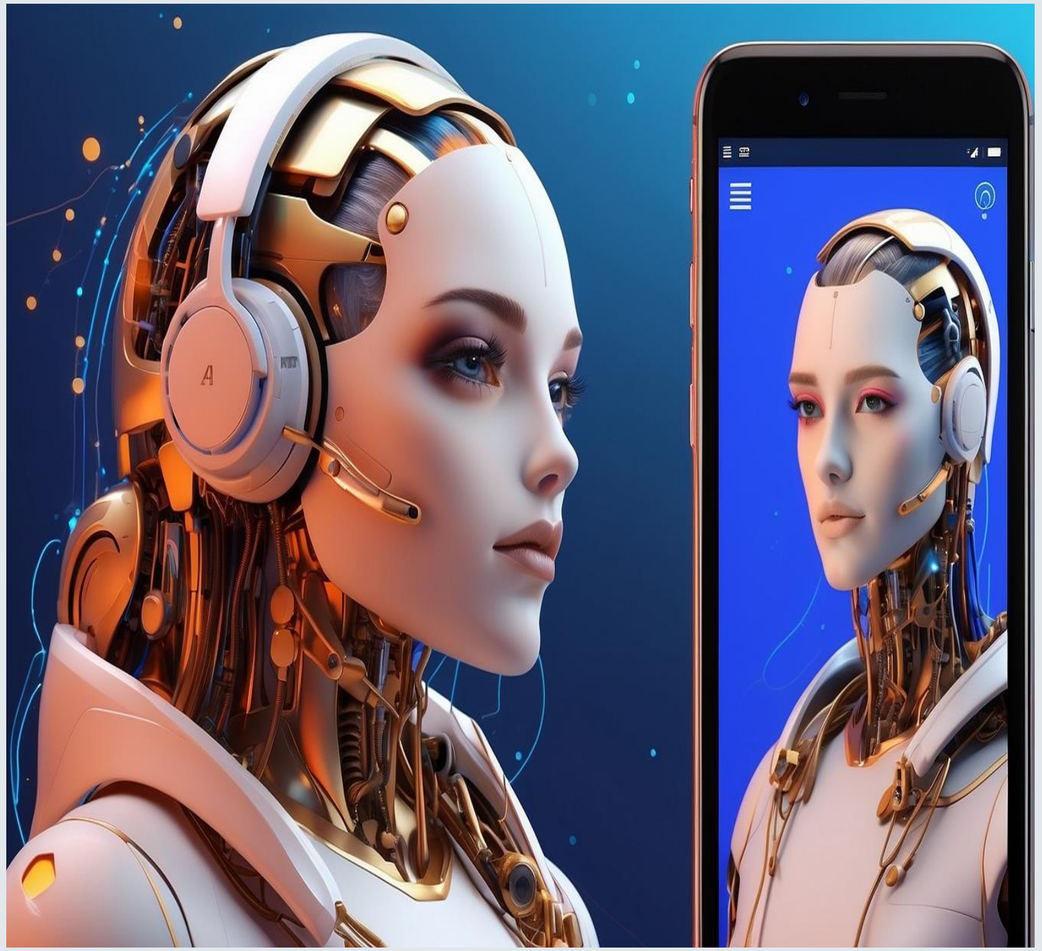
AI ASSISTANT FOR E-COMMERCE CUSTOMER SERVICE:

“A polite, sentiment-aware chatbot that answers questions, offers information, and assists users, making shopping a seamless experience"

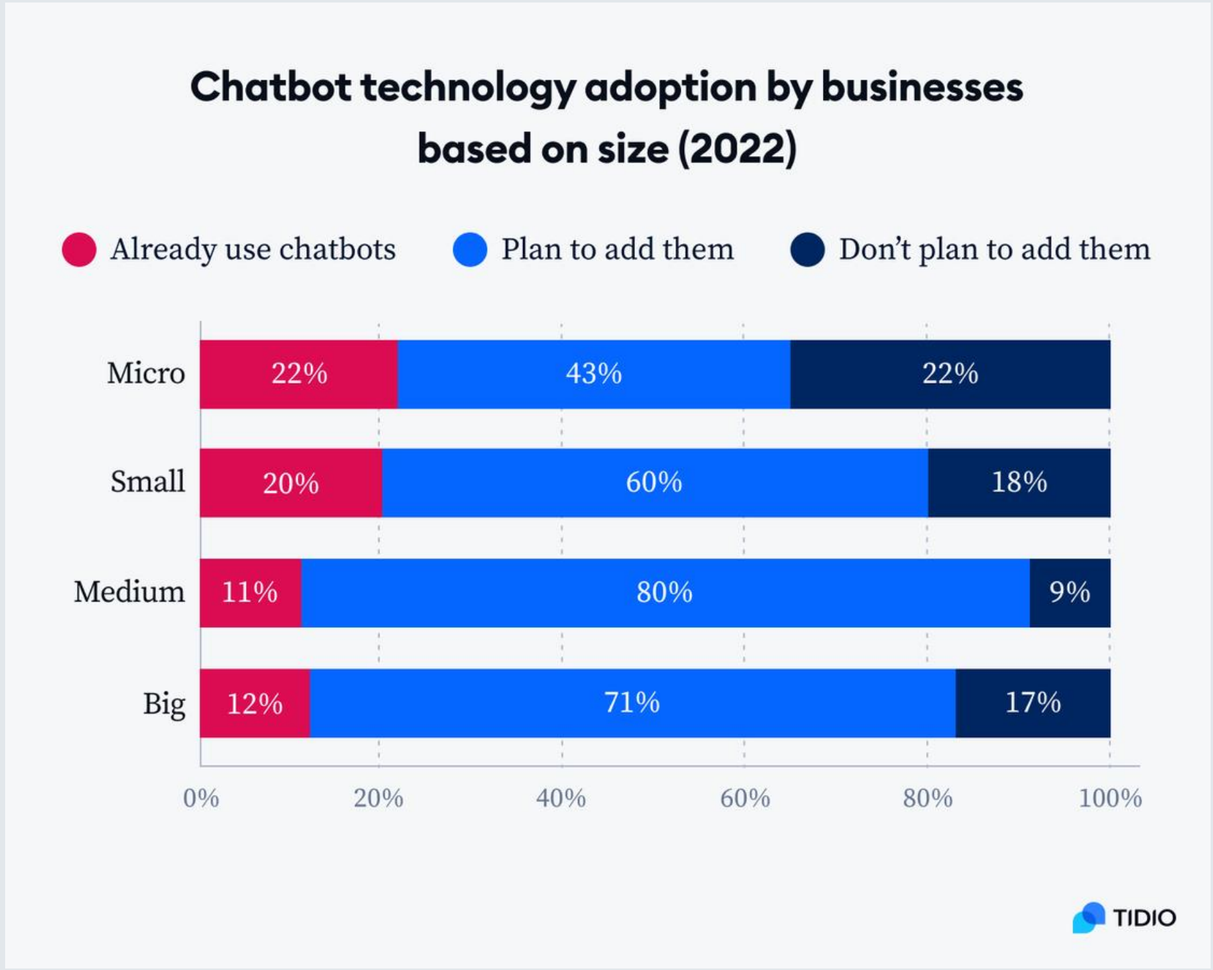
Part 1 :
Introduction

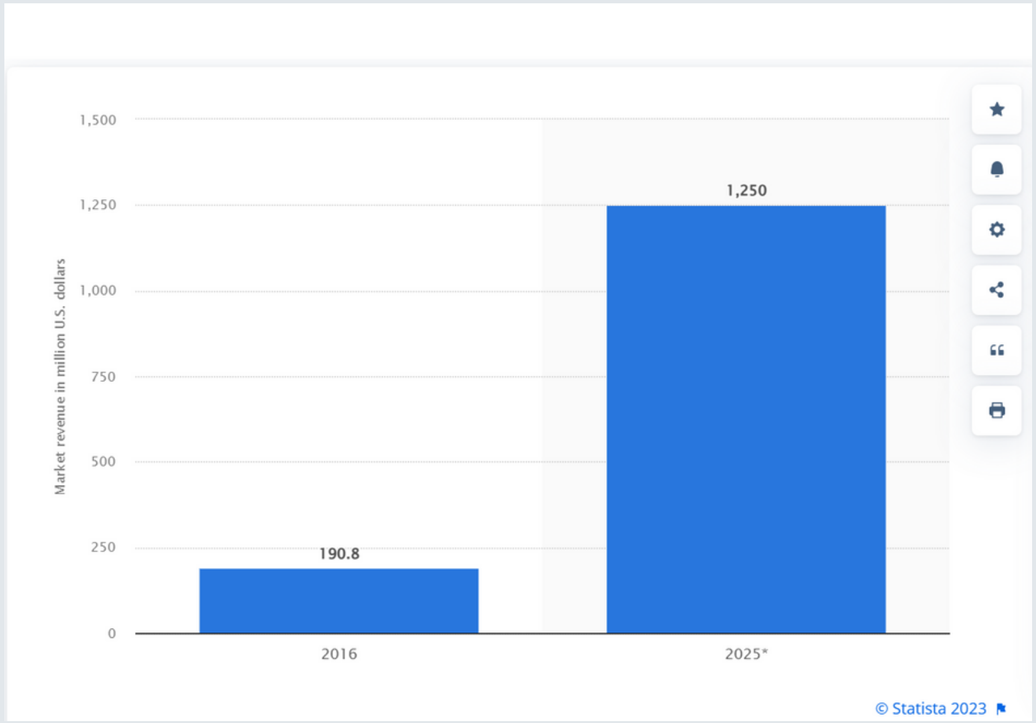
WHY?

- Enhances the shopping experience with personalized product recommendations.
- Understands and responds to user emotions and preferences.
- 24/7 availability for improved customer service.
- Increases efficiency and reduces operational costs.
- Drives sales and conversions with tailored assistance.
- Provides businesses with a competitive edge.



WHY?


Chatbot technology adoption by businesses based on size (2022)
Already use chatbots
Plan to add them
Don't plan to add them
Micro
22%
43%
22%
Small
20%
60%
18%
Medium
11%
80%
9%
Big
12%
71%
17%
0%
20%
40%
60%
80%
100%
TIDIO


1,500
1,250
1,000
750
500
250
0
Market revenue in million U.S. dollars
190.8
1,250
2016
2025*
© Statista 2023

PROBLEM STATEMENT AND OBJECTIVES

Enhancing e-commerce support efficiency, reducing delays, and boosting customer satisfaction and engagement through AI assistant development.

Develop and deploy an AI chatbot for retail products, emphasizing efficient customer interactions and satisfaction.

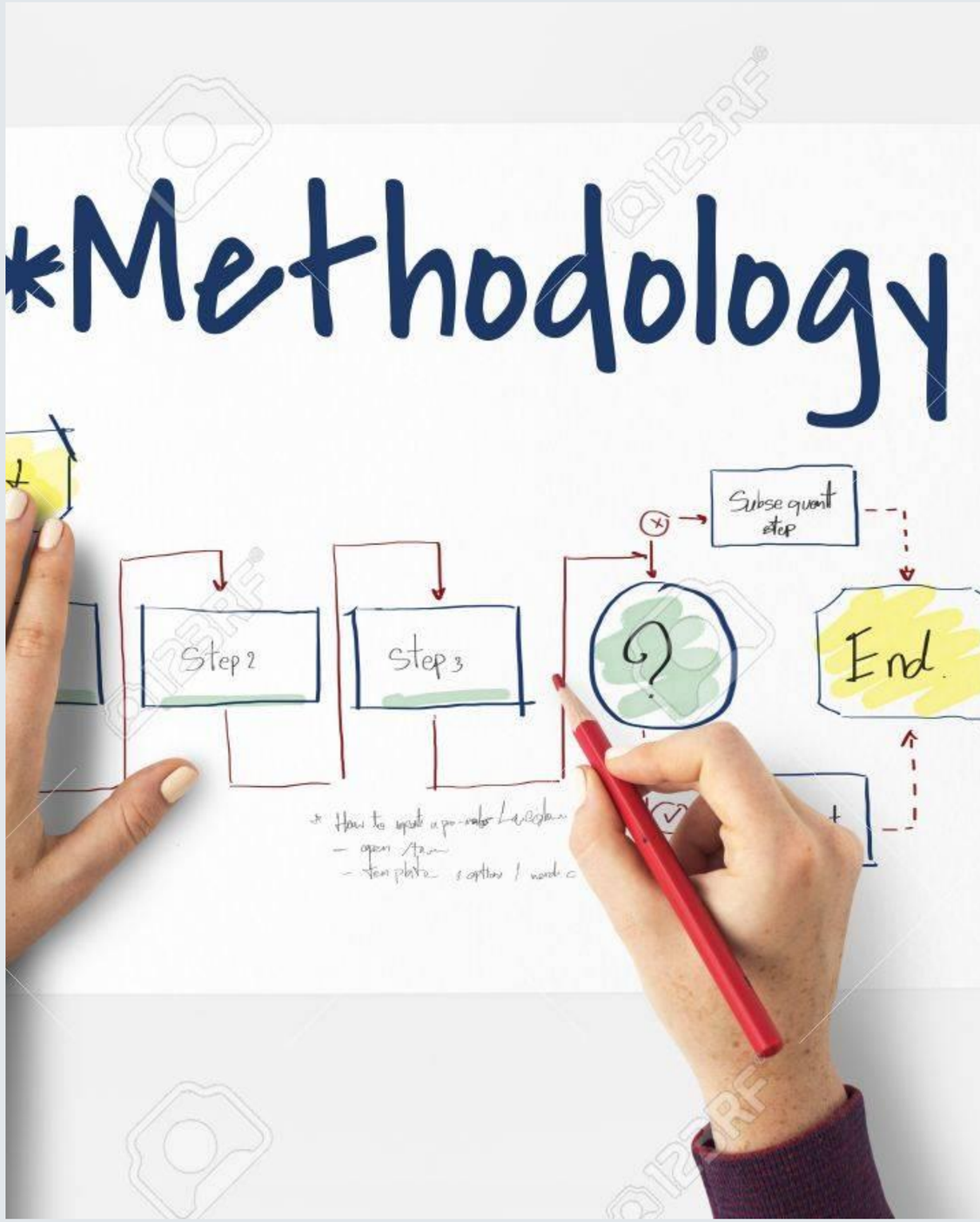
Part 2 :

Project Overview

Part 3 :

Methodology

In this section, we delve into the core processes behind our chatbot's development. We discuss how we collected and prepared data, employed our model to interpret user queries and sentiments. the chatbot's conversational flow, and our comprehensive testing and validation procedures. Ethical considerations, technical implementation, and insights derived from data analytics are also covered, providing a holistic view of our chatbot's development process.



Data collection and cleaning

This pivotal phase elucidates our approach to gathering vital data through web scraping techniques from Amazon website. We reveal the web sources from which we extracted data, including product details, pricing, and customer reviews. Our reliance on web scraping ensures that our chatbot is well-informed and capable of offering real-time and comprehensive product information.

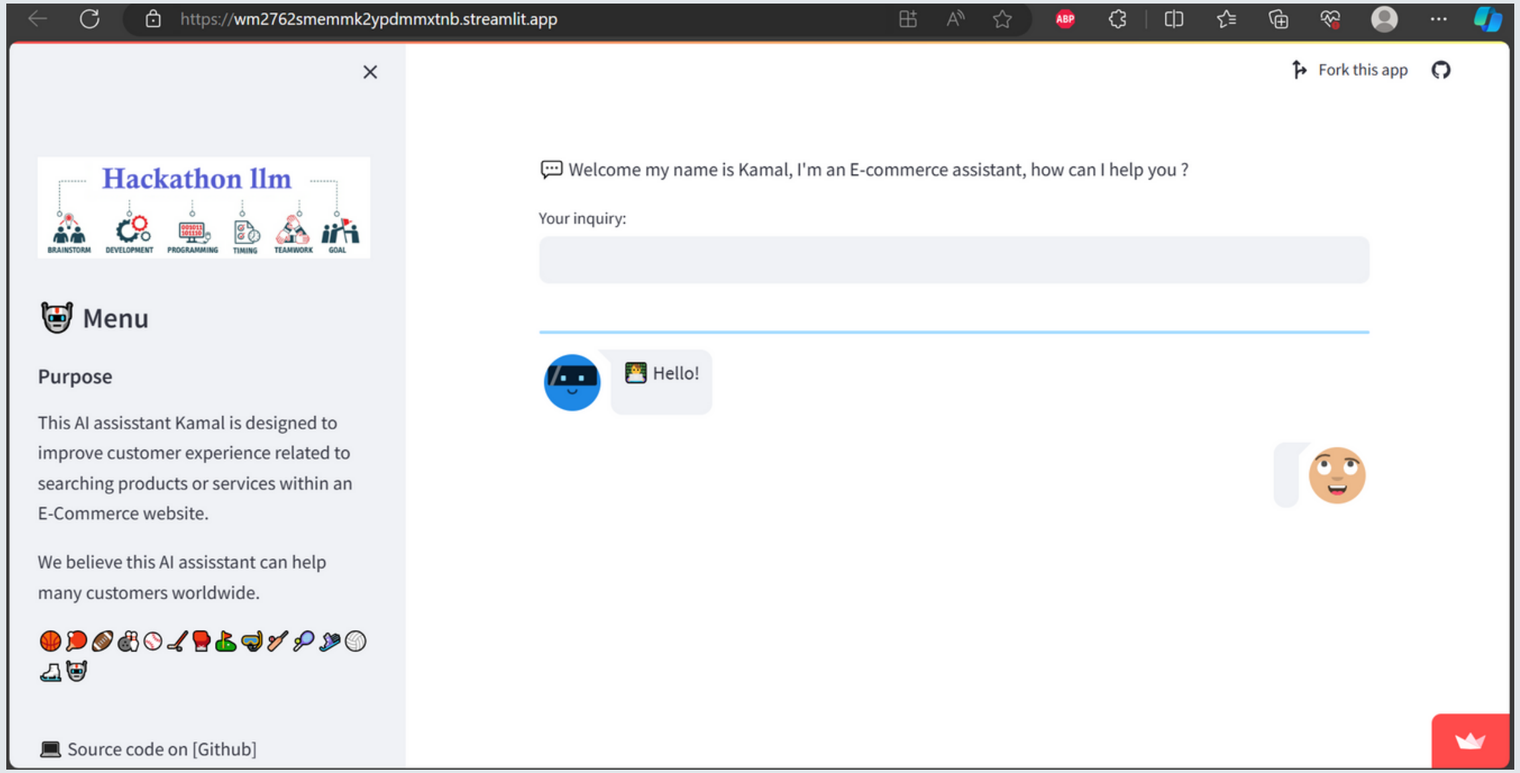
Model developement

- LangChain is an open source framework that lets software developers working with artificial intelligence and its machine learning subset combine large language models with other external components to develop LLM-powered applications.
- Falcon-7B is a foundational LLM with 7B parameters, training on one trillion tokens. Falcon 7B is an autoregressive decoder-only model. An autoregressive decoder-only model means that the model is trained to predict the next token in a sequence given the previous tokens. The GPT model is a good example of this.

Model deployment

The model was deployed using streamlit, wihich is an open-source app framework for Machine Learning and Data Science teams to create beautiful web apps in minutes.

Streamlit



Future Work

- **Multilingual Support:** Extend the chatbot's capabilities to support multiple languages, catering to a broader customer base.
- **Voice and Visual Interaction:** Explore integrating voice and visual recognition technologies to enable more diverse interaction modes.
- **Continuous Learning:** Develop mechanisms for the chatbot to continuously learn and improve its responses and product knowledge.

Thank you !