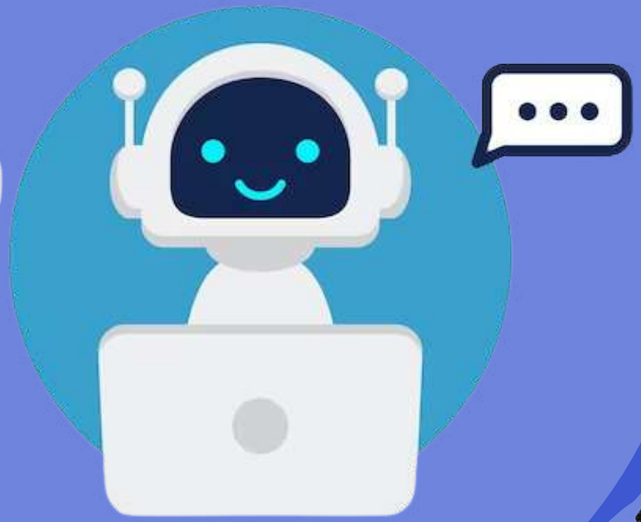
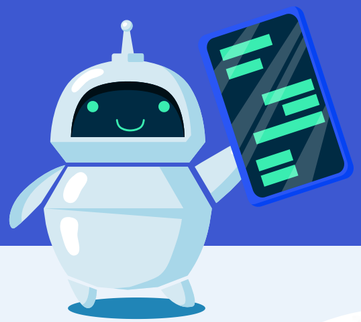


AN AI CHATBOT TO BOOST SALES FOR A RETAILER OF ADIDAS AND NIKE.

TEAM 142

Meet our team



Dũng Minh

Data Scientist

- Member of “Young Scientist Conference” Team
- Former participant of Vietnamese national programming contest

Minh Hiếu

AI Robotics Engineer

- Former IT Employee at Hai Thanh Food
- Skills: Python, Java Script, C++

Phương Uyên

Business Analyst

- Associate Consultant at Beestudious Consulting
- Former co-founder and co-president of LHP Debate club

Khánh Linh

Marketer

- Marketing coach for Kangen Enagic Company
- Entrepreneur of an online business

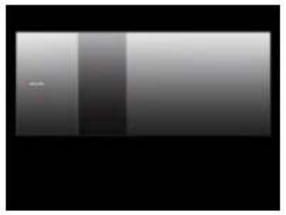
Cẩm Quỳnh

Customer Service Representative

- Member of Media Club
- Marketing planner for a project at Manulife

Background

- Adidas and Nike the world’s biggest sportwear brands. With brand reputations, variety of high-quality products, strong e-commerce infrastructure and marketing strategy, online sales are a major growth opportunity for their businesses.
- Sales on websites account for about 24% of Nike's total sales and about 20% of Adidas's total sales in 2022,
- Adidas and Nike are ranked 1.6 and 1.7, respectively, out of 5 stars for their poor customer service on their websites. (Trustpilot, 2023)



Nike

Reviews 7,593 • Bad

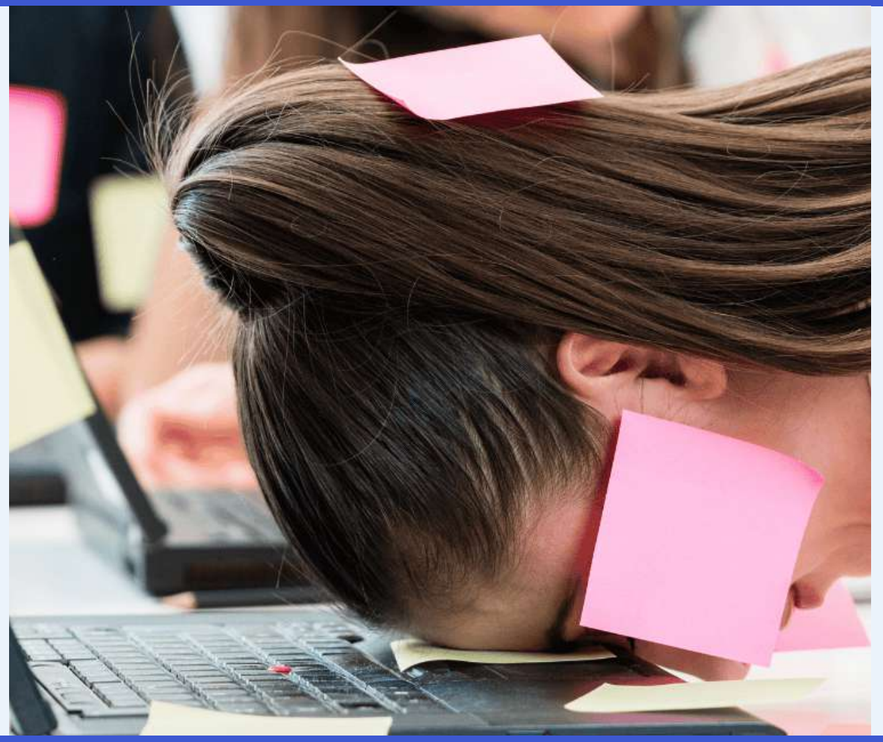
1.7

adidas

Reviews 2,268 • Bad

1.6

Problem statement

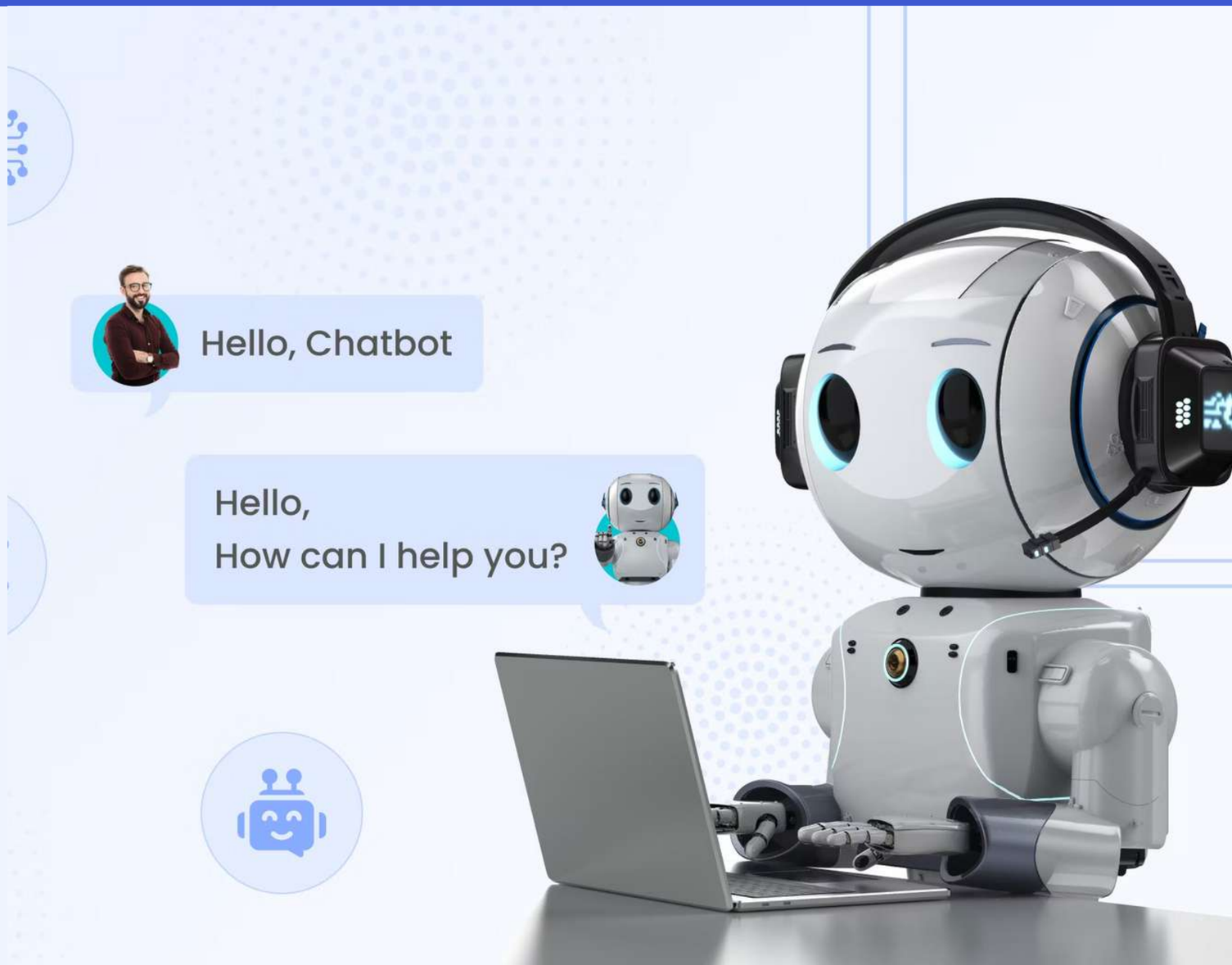


A retailer that sells Adidas and Nike products online is confronting some problems:

- Customers are frustrated to wait for long hours to get a response from customer service about product recommendations, orders, refunds, or exchanges.
- A high volume of 1,500 Adidas and 100 Nike products overwhelms customer service representatives.

Solution: AI Chatbot

- Is designed to enhance the customer experience for both Adidas and Nike's e-commerce business.
- Provides customers with a personalized way to interact with the brands,
- Offer instant responses through text messages and voice messages.



Benefits

For Retailers

- Provide 24/7 customer service, which can help save costs (labor, taxes, rent, etc.) and improve customer experience
- Sell and market products and services effectively
- Collect data about customers, which can help them understand their needs and preferences better

Marketing

- Send messages, advertise, and provide information
- Reach more customers and increase brand awareness
- Used on e-commerce platforms, websites, or placed in stores

Sales

- Introduce products, sell products, and provide customer service
- Increase sales and improve conversion rates

Finance

- Cost optimization
- Perform self-service tasks such as checking account balances, transferring money, paying bills, etc

Benefits

For customers:

- Quickly and easily find information and answer questions.
- Make it easy for users to shop and place orders online.

Customer service:

+ Used to answer customer questions
+ Resolve issues, and provide support.
+ Help businesses save money and improve the customer experience.

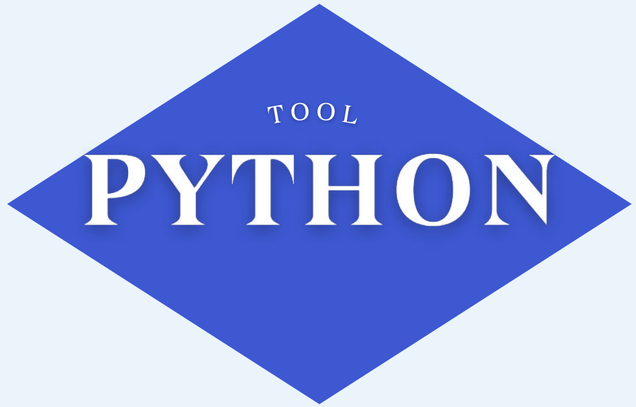
=> It can alleviate the workload of customer representatives by remembering a vast array of data, including product information, customer preferences, and purchase history.

Methodology

Input: can be a text or voice question.

Output: can be a text or audio response.

Process:



- If the input is voice, use speech-to-text to convert it to text. This can be done using **Google API speech** to text or **AssemblyA**I or **Open Source Speech-to-Text Transcription Engines**.
- Use the **OpenAI API** to generate a response.
- Combine the response from the OpenAI API with the response from a traditional chatbot that answers questions based on a set of questions and a custom domain dataset about Nike and Adidas.
- Use the text to speech API from **Google** or **Amazon Polly** or **Microsoft Azure Speech Services** to generate the output.

How to Train the Bot?

1. Prepare Training Data:

- Clean and preprocess natural language data in a way the model can understand.
- Identify intents and entities that the chatbot needs to recognize.

2. Tokenization and Vectorization:

Tokenize the text and convert it into numerical representations for machine learning processing.

3. Build the Model:

- Choose a suitable model architecture (e.g., RNN, LSTM, Transformer) based on project requirements.
- Build the model using the prepared data.

4. Training and Evaluation:

- Train the model on the split training and testing datasets.
- Evaluate the model's performance using metrics such as accuracy, precision, recall, and F1-score.

5. Optimization:

- Tune hyperparameters and improve the model based on evaluation results.
- Use techniques such as regularization to avoid overfitting.

6. Deployment and Quality Control:

- Deploy the chatbot and monitor its activities to ensure service quality.
- Update the model over time as needed.

Core functionality

REMEMBER DATA AND ASNWER QUESTIONS

- Remember and analyze product data, customer data
- Provide accurate information and give recommendations about products to customers

VOICE MESSAGES

- Increase engagement and emotional connection with customers
- Enhance Understanding and Retention

NATURAL LANGUAGE UNDERSTANDING

- Understand and interpret natural language input from users
- Understand emotions of customers through sentiment analysis.

Performance metrics

CUSTOMER SATISFACTION

- Determine a user's overall attitude towards a chatbot
- Ensure collecting customer's feedback
- Assess the proportion of customer queries

CUSTOMER ENGAGEMENT

- Examine how chatbot interactions are dístributed across various channel
- Calculate the average length of chatbot discourses

CHATBOT EFFECTIVENESS

- Measure the number of customer tasks
- Determine the percentage of queries
- Examine how well a chatbot can understand customer's intents

COST EFFECTIVENESS

- Calculate the cost of resolving the a customer inquiry
- Following up on customers' problem resolution through the first

Timeline and roadmap

IDEATION (1-2 WEEKS)

- Workshop
- Chatbot introduction
- Define vision
- Target customer
- Chatbot's deployment channels (Adidas & Nike website

INSTALLATION AND SCRIPT DEVELOPMENT (3-5 WEEKS)

- Install the chatbot on websites
- Develop the chatbot script
- Coding: Build an AI Chatbot with Python
- Test the chatbot script

TESTING AND EVALUATION (2-4 WEEKS)

- Test the chatbot with users
- Collect feedback from users
- Evaluate and improve the chatbot

DEPLOY & OPTIMA (CONTINUOUSLY)

- Deploy the chatbot on websites
- Track and analyze data

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