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# APPLY CHATBOT FOR SHOPPING

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# 1 Introduction

Effectively addressing the challenge of managing and processing a large volume of customer messages is crucial for businesses. Our Minimum Viable Product has been developed to provide a novel and efficient solution to this issue.

## 2

# Problem Statement

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### Identifying the Problem

The human resources available for online marketplace moderation are decreasing, unable to meet the increasing demands of customer requirements

### Disadvantages

The chat overload, slow response to messages, and ineffective interaction with customers have resulted in a decreasing business turnover for the company

### Competitive Landscape

Many companies have begun integrating AI into customer messaging to reduce human resources and boost revenue

## 3 Solution Overview

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### AI-Based Solution

Our MVP proposes an Artificial Intelligence (AI)-based solution to address the identified problem. This solution employs a chatbot model based on the Chatfuel platform to facilitate intelligent interactions and provide information

### Unique Aspects

Implementing the BERT model to enhance the understanding and responsiveness of the chatbot. Meeting business needs uniquely by integrating custom features, such as incorporating CRM systems to provide personalized information and the best services for customers

# 4

## Methodologies

### **AI Model Architecture using Chatfuel**

This is a data-driven architecture with the ability to automate tasks and interact with users through a chat interface on Messenger



# 4

## Key Components, Layers, and Modules

Chatfuel Interface: The primary interface for managing bot blocks and keywords

The screenshot displays the Chatfuel interface, which is used for managing bot blocks and keywords. The interface is divided into several sections:

- MAU SẮC (Colors):** A grid of color swatches for selection. The colors include black1, blue1, white1, pink1, grey1, multi1, green1, red1, fossil stone1, Fossil Rose1, Psychic Purple1, Light Smoke Grey1, Flat Pewter1, Grey Fog1, Iron Grey1, gold1, purple1, yellow1, orange1, MNN1, MetalSilver, Hyper Jade, sail, University Red, Royal, Bleached Coral, Psychic Blue, Vivid Green, and Safety Orange. A "Show Stats" link is visible next to the "MAU SẮC" header.
- NEW COLORS:** A grid of new color swatches. The colors include Nike College (Georgia), Nike Dri-FIT Sideline Veloc..., Nike Sportswear, Air Jordan 1 Low SE, and Air Jordan XXXV Low DS.. A "Show Stats" link is visible next to the "NEW COLORS" header.
- Inbound links:** A section showing the current inbound link as "Facebook Page".
- Outbound links:** A section showing the current outbound link as "None. 😊 Send users to another block or a URL from here."
- Block Creation:** A section for creating new blocks. It shows a block with the text "Hi, {{first name}}!" and a description: "Users will receive this block after clicking the 'Get Started' button in your [bot](#)." Below the block is a button labeled "+ ADD BUTTON (OPTIONAL)".
- Tip:** A tip box stating: "Tip: There's an easier way to build your bot! We recommend using the Flows tab instead. (Navigate using the bar on the left.)"

A large blue button labeled "Blocks" is positioned on the right side of the interface.

# 4

## Key Components, Layers, and Modules

Chatfuel Interface: The primary interface for managing bot blocks and keywords

### Keyword groups ?

+ Add group

Sportswear Comfy & Chill Full Zi...

Block or Flow ▼

Sportswear Comfy & C...



Contains

+ Add random response

Sportswear Comfy & Chill Full Zip Hoodie ×

Comfy ×

Chill Full Zip Hoodie ×

Full Zip Hoodie ×

Doing nothing ×

Resetting ×

Unwinding ×

Rewarding ×

Do something ×

+ add keyword

**Keywords**



# 4

## Key Components, Layers, and Modules

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The main modules of the model

### Question Processing

Contains rules for understanding and responding to diverse user queries

### Sales

Includes functions for product introduction, order processing, and providing pricing information

### Social Interaction

Contains features for interacting on social platforms, such as responding to customer messages

## 4 Tools used



Python

data processing



Power BI

draw graphs to analyze data



Chatfuel

build chatbots



Facebook

chat interface

# 5

## Core Functionality

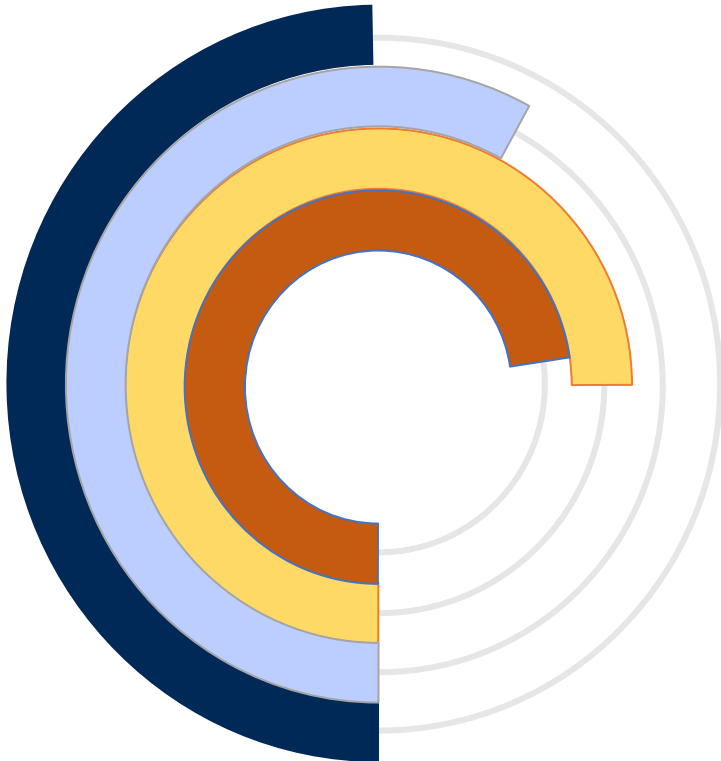
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### Functionality and Features

- Basic Communication: understand and respond to basic user questions
- Product Information: provide basic information about products or services
- API Integration: The ability to connect and fetch information from external sources through APIs

## 6 Performance Metrics

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Accuracy: Evaluates the precision of the chatbot's responses to user queries

Response Time: Measures the duration it takes for the chatbot to reply after receiving a request from the user

Successful Interactions: Counts instances where users interact without encountering significant issues.

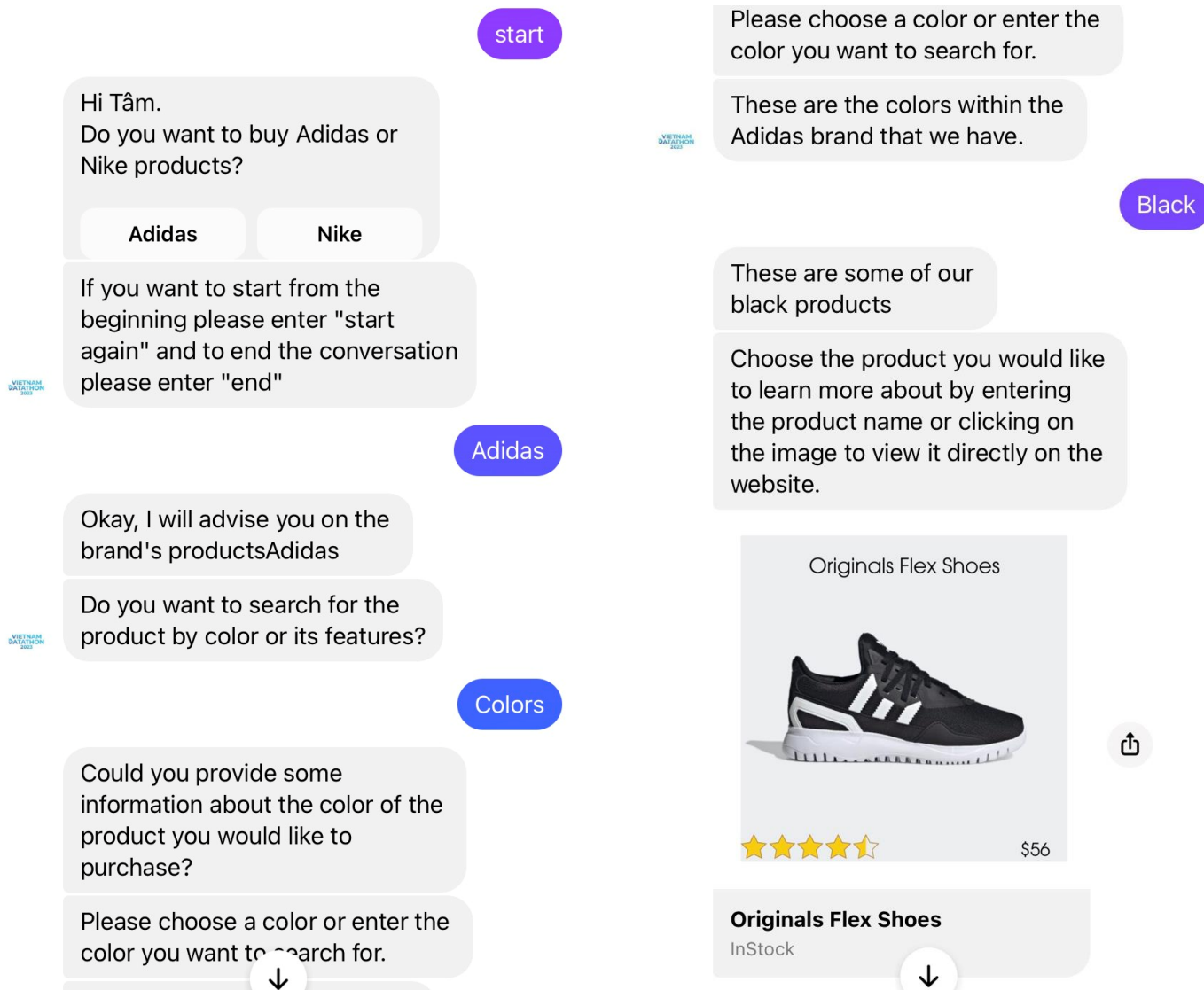
# 7

## Time line



## 8

## User Interface



Users will interact with the chatbot through a page we create on Facebook. They can engage with AI-powered features through a visual chat interface

# 9

## Limitations and Improvements for the Future

### Limitations

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#### Feature Scope

MVP performance relies heavily on the quality and quantity of training data. Data limitations may lead to inaccuracies or incomplete responses

#### Complex Language Interaction

MVP is encountering difficulties in understanding correctly and providing accurate responses

#### Data

The MVP not support some complex or specialized requests, limiting its ability to handle specific tasks

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## Limitations and Improvements for the Future

### Improvements

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#### Enhancing Training Data

Increasing data collection and training the model with a more diverse and extensive dataset

#### Expanding Features

Developing and integrating additional features to expand the MVP's scope and capabilities, especially in areas requiring complexity

#### Language Optimization

Continuously refining and optimizing the model to improve language understanding and natural language interaction



Our MVP proposes an Artificial Intelligence (AI)-based solution to address the identified problem. This solution employs a chatbot model based on the Chatfuel platform to facilitate intelligent interactions and provide information.

Meeting business needs uniquely by incorporating custom features such as integrating CRM systems to provide personalized information and deliver the best services to customers

A prominent solution involves leveraging the BERT model to enhance the comprehension and responsiveness of the chatbot. This model is fine-tuned for specific contexts to ensure optimal performance

**We believe that this innovation will have a positive impact and create value for businesses in general, especially online enterprises, while simultaneously providing positive experiences and the best services for their customers.**

**THANK YOU!**