

Built and Deployed a **Conversational Chatbot for 24/7** **Customer Support** Assistance

Deployed an Intelligent Virtual Assistant called 'Sophie' on the client's website to enable faster query resolution by guiding the visitor through every step.

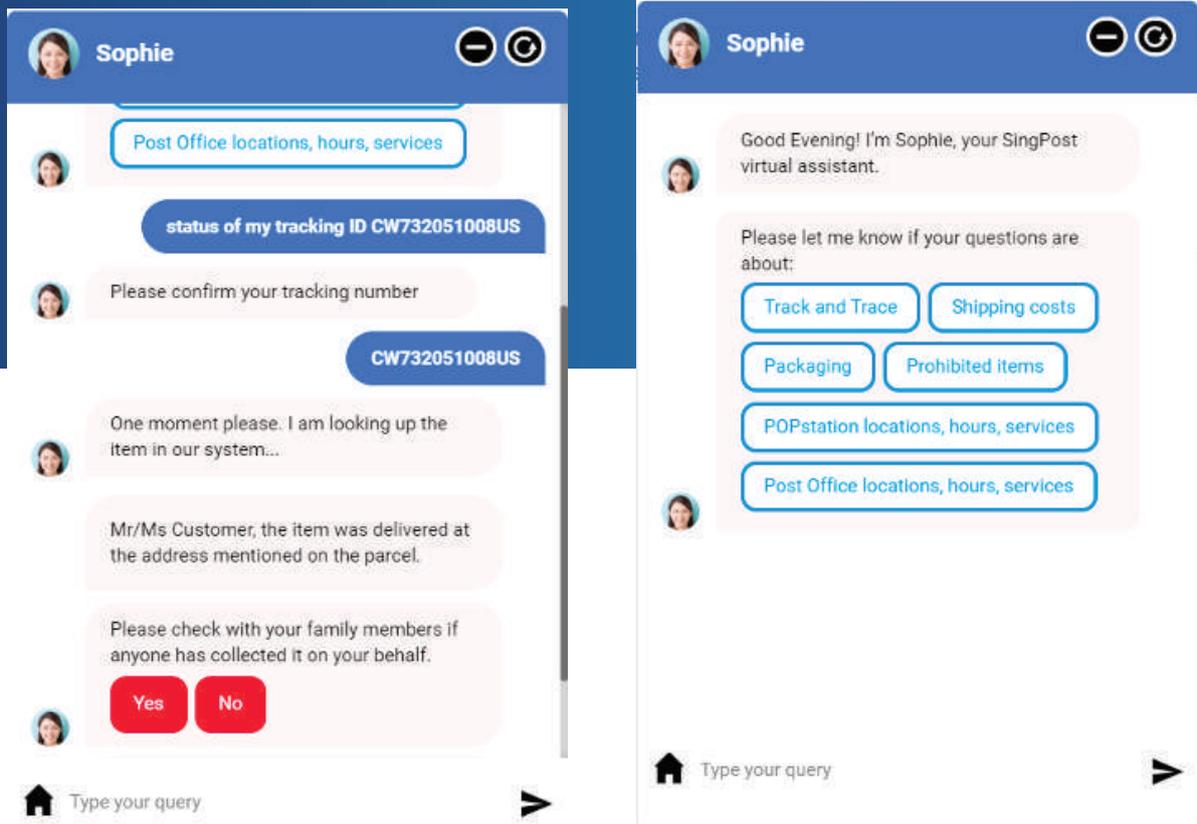
— The Client

A global leader in eCommerce logistics, providing innovative mail and logistics solutions in Singapore and around the world, with operations in 19 markets. Their solutions include front-end web management, warehousing and fulfilment, last mile delivery and international freight forwarding.

— **Executive Summary**

When it comes to shipment-related queries, there is an expectation among customers for immediate answers and issue resolution. And most traditional customer support systems are not equipped to handle these conversations effectively. The client needed an interface that will help their customers make booking requests, assist them with shipment tracking, answer FAQ's and resolve other shipment-related issues.

Project Duration
3 months



Screenshots of Chats with 'Sophie', the Bot

— Challenge

The client's website was getting about 300,000 visitors every month with more than 100 active users during peak hours. With only a limited number of customer support agents available, it was becoming difficult to handle the volume of queries.

The challenge was to automate the process of replying to enquiries and suggestions on their website, while having a 24/7 live, interactive chat support for visitors to improve resolution speed.

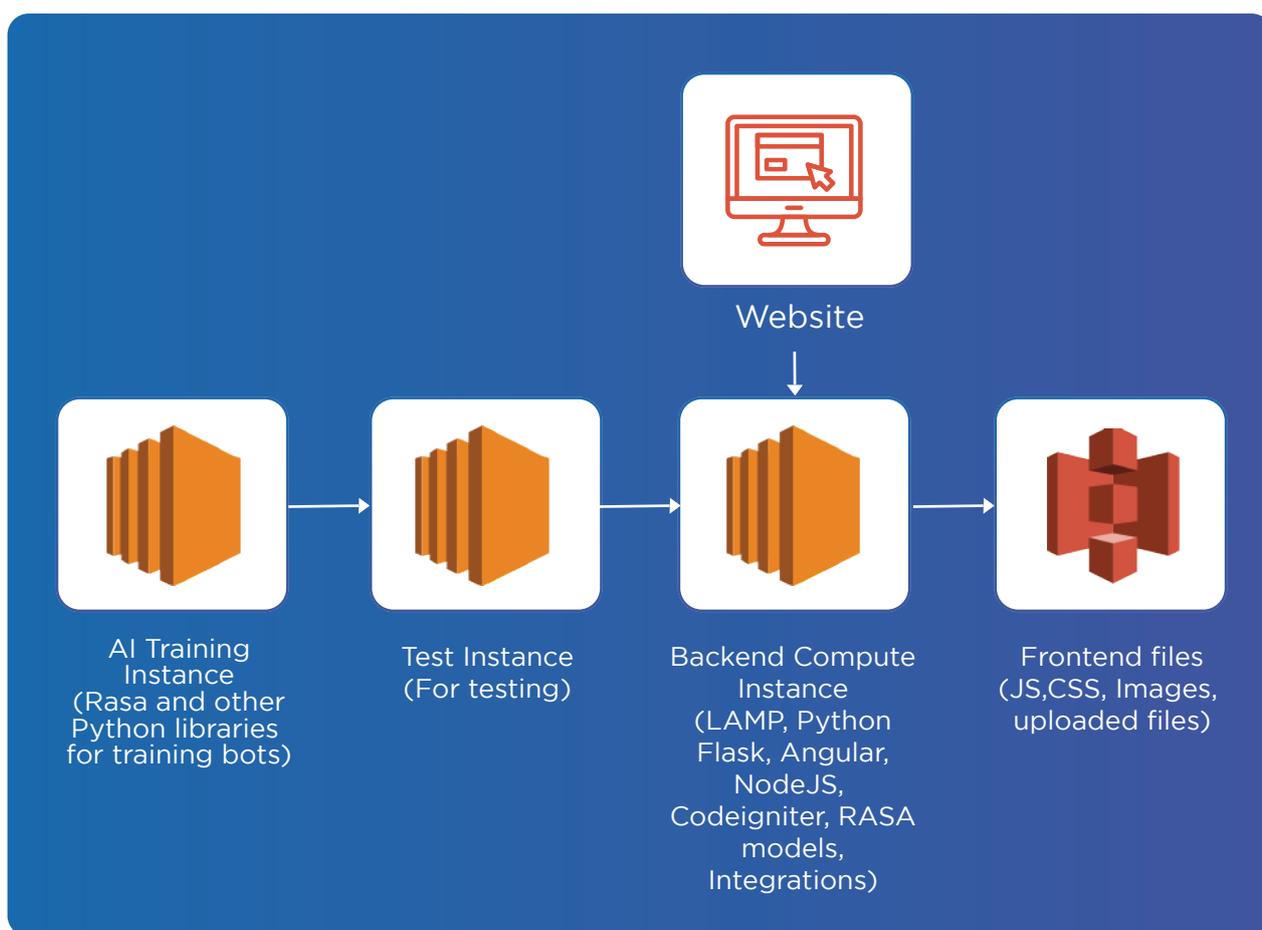
— Approach

While the business was growing, the customer support remained a small team, working in fixed hours with limited resources. Problems such as longer call queues and wait time led to customer dissatisfaction.

Through our design thinking approach, we found that 30% of the queries were frequently asked questions, while about 50% needed basic calculation. The remaining queries needed deeper analysis. An intelligent chatbot deployed on the website would lead to 24/7 customer support assistance and enable faster query resolution.

— Solution

By using artificial intelligence, machine learning, and natural language processing technologies, we built and integrated a smart chatbot that can initiate conversations and respond to questions instantaneously in a comprehensible, human-like manner.



Flow Description

- Intents are collected and trained on a RASA instance for NER using Spacy Library
- Flows are handled using RASA
- Trigger script is placed on the website code
- It is connected to the backend on prem server for processing real-time chat requests.

Essential Details

- Total data size: 10000 named intents
- Training data : 10000 named intents
- Pre-processing steps: Stop word removal embedding
- Base model: Spacy
- Type: Named Entity Recognition
- Framework: NLTK

This AI-powered chatbot learns with every interaction, adapting to the nuances of the human users. 'Sophie', the bot, can help the visitors with the following queries:

- **Track & Trace** (understanding the status of the shipments)
- **Shipping costs** (calculating postage rates and handling new booking requests)
- **General enquiries** such as drop locations, availability of services at post offices, and queries regarding prohibited and restricted items for delivery

We designed and built an AI-powered chatbot that reduced customer service costs and helped the client scale their customer support effectively.

Instant resolutions

to provide better customer satisfaction

24/7 customer service support

by providing resolutions to common queries

Enhanced user experience

by giving them access to the entire knowledge base through the chatbot

— How the Product Helped

As both a live-chat pop-up and embedded on-page solution, 'Sophie' has reached out to users when they clicked the contact button or dwelled on-page for too long. This has achieved 54% automation with 70% of customers getting their queries resolved end-to-end using the assistant. Which in turn, has taken the load off the voice and chat support team, bringing down their average resolution time by 21%.

Sophie becomes smarter as "she" interacts with more customers over time with the goal to offer a personalized customer experience based on the visitor's past interactions.

— Tech Stack

NGINX

Load Balance
NGINX



Cache
Redis

VESTA

Monitoring
VestaCP

solarwinds
LOGGLY

Logging
Loggly

LAMP

Dashboard
Backend
Lamp



FrontEnd &
Chatbot
AngularJS



CodeIgniter
PHP Framework
Codeigniter



Integrations, Data
Validation etc
Python



Security
Oauth

https://

Security
HTTPs