# Amazon Shopping Assistant

AmaBot

Overview

The purpose of AmaBot is to help mobile customers navigate their search and guide you to the online store areas that align with your purchase desires.
Integrated with the AmaBot is a Visual Q&A Platform for increased accessibility.

Tell me the Customer Problem being solved

- Bots are ushering in one-to-one marketing at scale. This helps in providing personalized service to each customer engaging with our platform.
- A bot can be used to provide offline services! Customers in areas with a spotty/slow internet connection can interact with the shopping assistant over SMS and make purchases without using the internet.
- This interactive experience could also be used to provide services to customers who are unable to access the retail website/app normally. For ex. Visually challenged people, a person driving who wishes to shop using only his voice, etc.
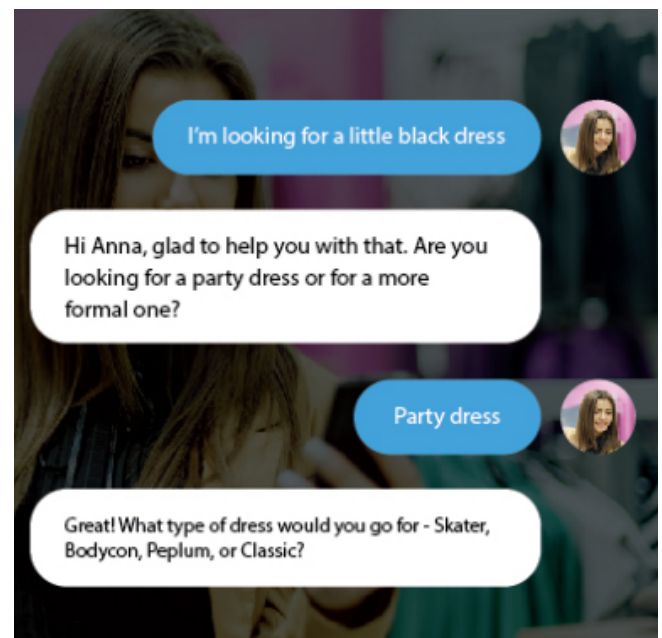
What is the technical innovation involved here?

- The **Bot Framework** used allows for sophisticated dialogs to be modelled, helping AmaBot sound more natural and understand customer needs better.
- Using the **Language Understanding Intelligent Service** (LUIS), I created a model for AmaBot to better understand intents or entities simulating language understanding. This model was ported to an HTTP endpoint, which can be used on any messaging service like SMS, whatsapp, Slack, etc.
- For the **Visual Q&A** aspect of AmaBot, given an image and a natural language question about the image, the task is to provide an accurate natural language answer. Mirroring real-world scenarios, such as helping the visually impaired, both the questions and answers are open-ended.
  This is a TensorFlow implementation of the VIS + LSTM visual question answering model. fc7 relu layer features from the pretrained VGG-16 model are used for image embeddings.

Let's get real, what's the business impact?

- Instead of relying on the customer clicking through the right things, you can start asking questions through a chatbot. The chatbot will guide the customers through that, which in turn result in a better conversion rate for your customers than if you just passively wait for them going through a web interface.
- Mobile messengers- connected with Chatbots and the E-commerce business can open a new channel for selling the products online.
- Chatbots can also upsell and cross-sell by recommending different products on the basis of a customer's previous purchases. E-commerce can rely on this interactive interface to personally handle customer objections and get customer feedback so as to improve their services, which will consequently increase customer satisfaction.
- Chatbots can increase customer touch points for retailers, helping them to raise brand awareness and establish a loyal customer base.