

Small Business Shopping Website

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Abstract - This paper looks at a platform developed to help support small businesses and help them reach out to a wider audience. To make it more efficient we have integrated a chatbot for a more interactive and personal interface.

Index Terms - *HCI, Chatbot, E-commerce*

I. INTRODUCTION

E-commerce has gained particular importance for the development of small businesses in the past year due to the restrictions imposed due to the spread of the new coronavirus infection. Our aim for this project is to design an E-commerce website for small businesses. To make it more efficient we have integrated chatbot for a more interactive and personalized interface. The proposed design of the chatbot is for selling goods through social networks, direct emails or web catalogs. The overall system shall be integrated into a singular, easy to use and intuitive application to help users.

The authors of the current project are developing an effective website for users to search for small businesses that are found in social media platforms and for the owners of the small businesses to promote their store. Additionally, to gain more knowledge about the website, a Chatbot is implemented to have a clear conversation with the website.

II. PROBLEM STATEMENT

Ever since the pandemic hit small business owners took a huge hit since most people are not going outside to buy items. So, it's best for them to switch to online platforms to do their business. The main aim of this project is to ensure that the transition from offline to online business won't be difficult for small business owners.

Most online shopping websites filter content from these small business owners and only let them sell things limited to a particular category. Our platform ensures that this is not the case. This project also has an integrated chatbot that interacts with the audience to help them make a decision when it comes to choosing what to buy and from where (which small business owner).

The overall system shall be integrated into a singular, easy to use and intuitive application to help users.

III. METHODS AND DESCRIPTION

- This project was visualized with the help of an architecture diagram. The architecture diagram was created using ‘visual paradigm tool’, which is an online platform to create architecture diagrams/flowcharts.
- The prototype of the website was created using Figma, which allowed us to visualize the website and also create a sample website with ease.
- The rough architecture of all three pages was created using Figma and then it was brought into life through coding.

- website, and a Chat page - for the audience to interact with the chatbot to help reach a decision.
- The primary page is the home page, which tells the user about the services our website has to offer, briefing them about the purpose of this website. From there, the user can either select the “shop” or “sell” option. On selecting the “shop” option, the page with all the small businesses and its details shows up. The user can browse through the various small businesses and select them according to their interests. On selecting the “sell” option, the form shows up. On filling this form, small business owners can join the website and start promoting their business right away.
 - On filling the form, the details entered by the user will show up on the “shop” page. This is the working of our website, as depicted in the architecture.
- The website consists of four main pages- a Home page, Sell page - to view the small businesses, Promote page - small business owners can join our

V. RESULTS AND DISCUSSIONS

There are many factors that must be considered when designing the user interface of a software because the user interface must be developed in such a way that the system will understand whatever the input given by the user. Interfaces should be fit and to use for any kind of user. Our website offers:

- A home page which briefs about the services provided by the website.
- A shopping page where the user can browse through the different small businesses.
- A form for a user to start promoting their business on the website.
- The form takes in all the details required by the website, and once successfully entered, it will show up on the page.

Some functionalities that are crucial to the working of the website are listed below.

Add sellers: Basic details like the name of the small business, link to the instagram page, contact number and the logo of the corresponding small business.

Chat Bot: Chatbots can help businesses take customer engagement to the next level. By using conversational AI chatbots, engagement can be driven based on the user data and made more interactive. These bots can deliver consistent answers that help avoid dishing out irrelevant information to customers.

Append business: Once the form is filled successfully, the details of the seller should appear on the page.

System Access: Anyone can access or join the website, as it is a website made for the public.

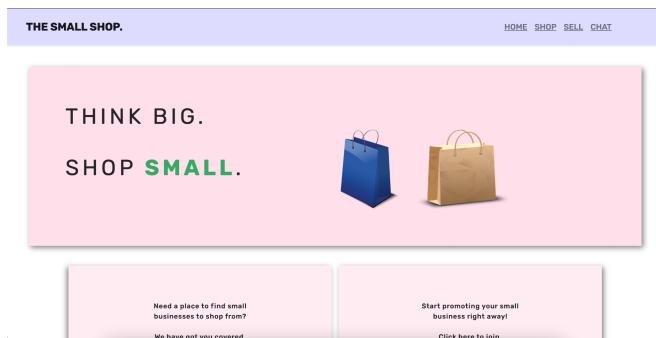
IV. TECHNICAL SPECIFICATION

The tech stack that we had used was HTML, CSS, JavaScript, PHP and MySQL. The frontend technologies were HTML, CSS, JS. And the backend technologies were JS, PHP and MySQL. The website was built using HTML, designed using CSS and Javascript for configuring the website behavior. Additionally, Bootstrap CSS framework was used which gave access to pre-defined templates for buttons, forms, navigation and other website components.

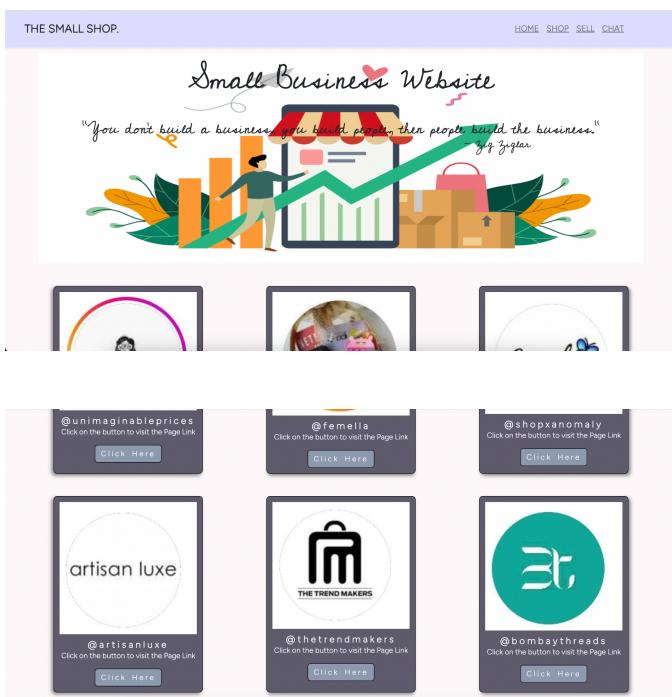
The seller information filled in the form was stored in the database using PHP. The database management system we used to store and manage data was MySQL. JavaScript was used for the functioning of the chatbot and HTML and CSS were used for building and designing the chatbot.

Screenshots of the resulting website after these implementations have been added below:

Home Page:



Shopping Page:

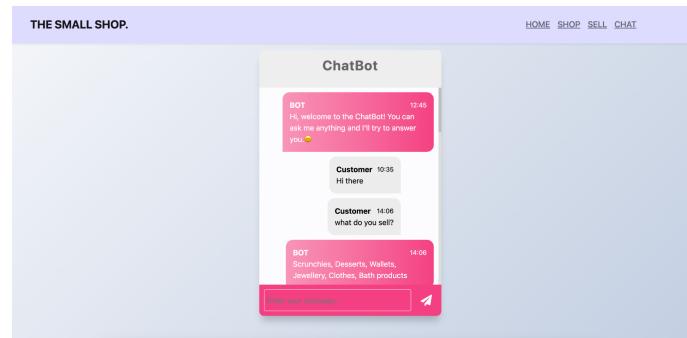


Registration Page:

The Registration Page has a light purple header with the brand name 'THE SMALL SHOP.' and navigation links. The main content area features the text 'We know the joy Spread the feeling' and a subtext 'Make your dream of becoming a small business owner come true!'. To the right is a form titled 'Promote Here' with fields for 'Name', 'Contact No.', 'Page link of your small business', and a file upload section. A note at the bottom says 'Choose File No file chosen'.



Chatbot:



VI. CONCLUSION

E-commerce has gained particular importance for the development of small businesses in the past year due to the restrictions imposed due to the spread of the new coronavirus infection.

Our aim for this project was to design an E-commerce website for small businesses, with an integrated chatbot for a more interactive and personalized interface.

This website was specially designed to promote small businesses, which have a small revenue generation and have a tough time reaching out to people. It is a 2 way website which will work for both sellers and buyers. We have included links to various instagram stores with different categories of products. We have also added a form where anyone can promote their page by filling it. There is also a chatbot that enables better interaction between customers and the admin.

- [5] Advanced web methodology for flexible web development by Hiuram Antunes and Inacio de Sousa Adelino da Fonseca. (Published in: June 2021).
- [6] Towards the integration of user interface prototyping and model-based development. By Catarina Machado and José Creissac Campos (Published in: November 2021).
- [7] Intellectual agility and innovation in micro and small businesses: The mediating role of entrepreneurial leadership (Published in: November 2021).
- [8] Small businesses are promoting innovation!! Do we know this? (Published in: January 2020).
- [9] HCI Research Issues in E-Commerce by Fiona Fui-Hoon Nah and Sid Davis (Published in: January 2020).
- [10] Issues and Challenges faced by E-Commerce in India by Shri Mahadev B. Bagadi (Published in: July 2019).

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By Mark Anthony Camilleri 1 , University of Malta, Malta and University of Edinburgh, Scotland (May 25, 2021).
- [2] SuperAgent: A Customer Service Chatbot for E-commerce Websites Lei Cui* , Shaohan Huang* , Furu Wei, Chuanqi Tan, Chaoqun Duan, and Ming Zhou.
- [3] Impact of COVID-19 on E-Commerce By Susmitha Kunchaparthi (February 2021).
- [4] E-commerce as a tool for the development of small business By Niiara Demiroglu (January 2021).

LITERATURE REVIEW

S no.	Name of the research paper	Concept	Findings
1.	E-commerce websites, consumer order fulfillment and after-sales service satisfaction: The customer is always right, even after the shopping cart check-out! By Mark Anthony Camilleri 1 , University of Malta, Malta and University of Edinburgh, Scotland May 25, 2021	Deals with the importance of customer satisfaction, website functionality and electronic service quality during the development of an e - commerce website especially after the breakout of COVID-19.	Confirmed that the online users' satisfaction levels with the service quality of the ecommerce website relied on different factors, including website attractiveness, functionality security as well as on consumer order fulfillment, during and after a purchase.
2.	SuperAgent: A Customer Service Chatbot for E-commerce Websites Lei Cui* , Shaohan Huang* , Furu Wei, Chuanqi Tan, Chaoqun Duan, and Ming Zhou	Chatbot used here takes advantage of data from in-page product descriptions as well as user-generated content from ecommerce websites, which is more practical and cost-effective when answering repetitive questions, freeing up human staff.	This leverages state-of-the-art NLP and machine learning techniques, including fact QA, FAQ search, opinion-oriented text QA, as well as chit-chat conversation modeling. Usability analysis shows that this chatbot has improved the end-to-end user experience in terms of online shopping.
3.	Impact of COVID-19 on E-Commerce By Susmitha Kunchaparthi February 2021	The concept of this paper is to study about how covid 19 impacts e-commerce business and change in demand and buying behaviour of consumers all of a sudden.	How e-commerce provides alternative way to people to meet their demands.How it got enhanced during COVID-19.

4.	E-commerce as a tool for the development of small business By Niiara Demiroglu January 2021	Reduction in revenue, especially for small business led to search for new ways to sell goods and services, so e-commerce provides the opportunity for them.	The development of e-commerce in the field of small business by entrepreneurs, since the rapid growth in the volume of sales of goods and services using technologies and is effective area of business.
5.	Advanced web methodology for flexible web development by Hiuram Antunes and Inacio de Sousa Adelino da Fonseca. Published in: June 2021	Web development is one of the ways to contribute to the digitization of organizations. This article explores the use of react on the frontend and nodejs on the backend. In terms of the data flow between the frontend and the backend, the GraphQL specification was used.	React is a library for building websites. It uses plain HTML, but on top of that, it provides a lot of handy features that add interactivity, and complex logic to websites. Node Js can help you build robust and effective REST APIs, mobile applications, and web applications.
6.	Towards the integration of user interface prototyping and model-based development by Catarina Machado and José Creissac Campos Published in: November 2021	Adobe XD is used to design graphical interfaces, and then automatically converts them to (Vue.js+Bootstrap) code, thus creating a first version of the implementation for further development. This is done through the interpretation of the SVG file that Adobe XD exports.	Adobe XD is a vector-based design and prototyping tool built specifically for website design. It was created by the world's leader in creative applications and offers a robust and intuitive design experience for any skill level.
7.	Intellectual agility and innovation in micro and small businesses: The mediating role of entrepreneurial leadership Published in: November 2021	It examines the relationship between intellectual agility, entrepreneurial leadership and the innovativeness of micro and small businesses in an efficiency-driven economy	Intellectual agility of employees positively influences the innovativeness of micro and small businesses, but this effect is strongly mediated through entrepreneurial leadership.

8.	<p>Developing a Web 2.0 Business Portal to Benefit SMEs, Industry, Local Government, and Consumers</p> <p>Published in: November 2015</p>	<p>Web 2.0 technologies are used that augment the Web, allowing for easy distributed collaboration. Different data sources are pulled together to provide new values with different combinations of data.</p>	<p>Adobe XD is a vector-based design and prototyping tool built specifically for website design. It was created by the world's leader in creative applications and offers a robust and intuitive design experience for any skill level.</p>
9.	<p>HCI Research Issues in E-Commerce by Fiona Fui-Hoon Nah and Sid Davis</p> <p>Published in: January 2020</p>	<p>Challenges faced by users in browsing websites and conducting searches for information, and changes for promoting ease of navigation and search.</p>	<p>Online vendors need to begin with a user-friendly and trustworthy Web site so that users feel comfortable and confident interacting with it. The web site should be designed in such a way that it facilitates product search within a short amount of time and provide users with a good sense of control over the interaction.</p>
10.	<p>Issues and Challenges faced by E-Commerce in India by Shri Mahadev B. Bagadi</p> <p>Published in: July 2019</p>	<p>Despite efforts like 'Digital India', the recent growth rate of eCommerce in India is far lagging behind than other developed countries. There are many big problems and challenges faced by an e-commerce industry. Factors like safety and security of online money transactions being the biggest problem along with others, have curb the smooth expansion of the online industry in the country.</p>	<p>E-commerce in spite of opportunities, hoopla and hype, also bears the connotations of challenges as well at the same time. We, therefore, enumerate the major challenges e-commerce in small enterprises is facing and also submit the remedial measures to meet these challenges.</p> <ol style="list-style-type: none"> 1. Infrastructural problems 2. Absence of Cyber Laws 3. Privacy and Security Concern 4. Digital Illiteracy and Consumer Psyche
