# KAMMIAN: E-COMMERCE WEBSITE FOR ARTISANS AND POTTERY MAKERS WITHOUT ANY INTERMEDIATORS

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#### **ABSTRACT**

Kammian, a web application aims to empower local artisans in Tamil Nadu, including pottery makers, by addressing the challenges they face in accessing markets and selling their products. Through Kammian, artisans can showcase and sell their products directly to customers, eliminating the need for intermediaries and expensive marketing apps. Leveraging real-time database capabilities, Kammian ensures a seamless, secure, and efficient e-commerce experience, providing customers with access to high quality products at affordable prices with minimal delivery time. Enable the rapidly usable AI in form of the Chatbot in sellers page for fulfill their needs. This paper discusses the development and implementation of Kammian, highlighting its unique features and benefits for artisans and customers alike. By fostering economic empowerment within local business streamlining communities and operations for artisans, Kammian has the potential to make a significant impact on the e-commerce landscape for small-scale businesses

**KEYWORDS:** E-commerce, Artificial Intelligence(AI), Chat Bot, Web Application, Database

#### INTRODUCTION

Many local artisans or pottery makers face countless challenges due to the lack of visibility of selling their products. These individuals, hailing from rural areas and small cities, often finding some difficulties to sell their products in larger markets, they need to travel long or many distance from their village to cities and town to meet their clients for sell. Alternatively, they may need to collaborate with companies or expensive marketing apps, These companies and market apps are retrieve the products and sold it for high prices and took the profit from their work. Mobile and e-commerce applications serve as essential tools for accessing the Internet and facilitating the purchase of products and services. As technology advances rapidly, these applications continue to evolve, offering error-free, more secure, scalable, and protective payments. By reducing the need for manual record-keeping and streamlining processes. online e-commerce applications enable local artisans or pottery makers to focus on other activities.

This case study, give the solution for selling their products easily through E commerce website specially for selling their products only not any other products. This paper is helpful for pottery makers and local artisan in rural areas to show case their own products in market. Significance of this paper is, first E commerce website for pottery makers also. Now a days

many people like maintain the environment safely and wants the traditional products to maintain safely. So this website is useful for buy the traditional handmade products easily and directly from the artisan and pottery makers, This makes less the empowerment of artisan and pottery makers and people also knows what are the traditional products in Tamilnadu and how they are making and what area is famous for those products.

## LITERATURE REVIEW

**1. PAPER TITLE:** E-Commerce for Artisans in Web Application Using Communication and Growth Technology

**AUTHOR:** K. Revathi,S. Priyanka,S. Kalaivanan,V. Gobalakrishnan,M. Kamalraj,R. Ranjith

**SUMMARY:** Through the provision of a digital platform for the exhibition and global sale of their handcrafted goods, the "E-commerce for Artisans" project seeks to empower craftsmen. By providing resources for online shops, inventory control, order processing, and safe payments, it closes the gap between craftspeople and customers. Consumers can support sustainable workmanship and cultural heritage, interact with producers, and peruse a variety of handcrafted products.

#### PROs:

The platform helps artisans get above geographic constraints by connecting them to a larger, global client base. The project promotes artisans independence and economic sustainability by facilitating direct sales.

Traditional skills and cultural heritage are preserved when distinctive handmade crafts are promoted and displayed. Consumers are able to communicate with the producers, which results in more customized and informed purchases.

#### CONs:

Due to a lack of technological expertise or internet connectivity, many artists may find it difficult to get and use digital tools efficiently. With so many similar products accessible in a competitive online marketplace, artisans could find it challenging to distinguish apart. Overseeing shipping, handling, and returns for international orders can present financial challenges as well as practical one. Changes in online purchasing trends may cause sales to vary, which could affect the stability of artisans' income.

PAPER TITLE: Tribal Welfare Application:
 A System to Connect Local Artisans & Agencies of MoTA

**AUTHORS:** S. Uthayashangar,S Sowmiya,K Dheebhika,V Swagatha

#### **SUMMARY:**

By providing a digital platform for artisans, the proposed project seeks to create a smartphone application that would improve the social and economic growth of tribal groups. Through this app, artisans can post pictures of their creations for the Ministry of Tribal Affairs (MoTA) to see and encourage. In order to promote contact between agencies, tribes, and the general public, it also has a chat function. In addition to enabling artisans to express questions about training and other topics, the site promotes collaboration for branding, marketing, and skill training.

## PROs:

The website increases the reach and economic growth potential of tribal artisans by giving them a digital forum to display their creations. The website enhances the business potential of artisans by facilitating access to branding, marketing, and skill-upgradation training by connecting them with the Ministry of Tribal

Affairs (MoTA).By facilitating fruitful communication between organizations, artisans, and the general public, the chat component promotes cooperation and community support

#### CONs:

Giving artists a way to market and sell their creations gives them the confidence to take control of their art and income. Better support and more fruitful participation result from the chat feature's encouragement of direct communication between agencies, tribes, and regular citizens.

3.**PAPER TITLE:** The Effect of Using Chatbots at e-Commerce Services of Customer Satisfaction, Trust, and Loyalty

**AUTHORS:** Surjandy, Cadelina Cassandra

#### **SUMMARY:**

This study examines the impact of chatbot service quality on customer trust, loyalty, and satisfaction in e-commerce during the post-pandemic new normal. Using data from 205 respondents and employing structural equation modeling and partial least squares (SEMPLS) techniques, the research identifies seven influential factors, including response time's effect on trust, usability's effect on satisfaction, and reliability's impact on trust, loyalty, and satisfaction. However, it also highlights seven factors that showed no significant influence. The findings underscore both the advantages and limitations of chatbot usage in enhancing the customer experience in e-commerce.

## PROs:

According to the survey, the quality of chatbot services can improve customer happiness, loyalty, and trust while also improving the overall customer experience. Businesses should concentrate on these areas to maximize chatbot performance by identifying seven important

factors (such as reaction time, usability, and dependability).

#### CONs:

The study's results, which came from 205 respondents, might not accurately reflect the wide range of e-commerce environments or apply to all clientele groups. If fundamental chatbot restrictions are not adequately addressed, system quality issues—a previously noted issue—may continue to exist.

**4. TITLE:** The Utilization of AI Extends Beyond Payment Systems to E-Commerce Store Development

**AUTHORS:** Sushant Mimani,Rakesh Ramakrishnan,Piyush Rohella

**SUMMARY:** Artificial Intelligence (AI) has thus been considered for the efficient functioning of e-commerce. The AI is such that it gives better experiences to the client and provides search functionalities, product recommendations. proper inventory management, and payment systems. Intelligent bots powered by AI interact with the customer to answer a few questions and lead the customers to a product that he or she may like. Automated search and recommendation work on the basis of what the customers have purchased in the past. The payment systems introduced can benefit by making the process easier, reducing security risk, and providing a general better user experience. These factors make e-commerce stores survive and maximize sales in the mature market

#### PROs:

The nature of customer engagement is enhanced through AI-powered chatbots and customized recommendations, thus resulting in greater satisfaction and involvement.

AI will help streamline processes within an organization- from inventory management and automated customer queries, product recommendations, and streamlining of payment systems - all aimed at improving operational efficiency. This would reduce security risks and instances of fraud through intelligent monitoring and validation of transactions.

#### CONs:

Setting up AI-driven systems could be quite expensive, not just small businesses or startups but also in the long run for large corporations. AI systems mean constant maintenance and updates, especially to keep the system accuracy at a certain level if one is dealing with resource-hungry systems. Efficiency of AI, therefore depends on larger volumes of data, shoddy data quality or privacy concerns can easily curtail the effectiveness of AI systems.

**5.TITLE:** Development of an E-Commerce Chatbot for a University Shopping Mall

**AUTHORS:** Victoria Oguntosin, Ayobami Olomo

#### **SUMMARY:**

The Hebron chatbot is developed as a web the Covenant University application for Community Mall (CUSM) in an attempt to intelligent and friendly provide participation in shopping. It has been built in Python, React.js, and MySQL to streamline interactions with users and draw out datasets on e-commerce. The chatbot will enable personalized recommendations, 24/7 customer better product assistance, and management for an efficient shopping journey and a more engaging experience.

#### PROs:

The chatbot offers personalized suggestions along with round-the-clock support; thus,

shopping becomes more interesting and less cumbersome for the customers. Consumers can easily locate products without having to wait on human support and find answers regarding various queries. It reduces their work on the part of administrators as it allows there to be smooth upgrades and efficient management of data through the Admin Portal.

#### CONs:

Such a chatbot and its integration with building e-commerce possibilities is extremely time- and money-intensive. Maintaining and debugging may start getting messy as the interaction among the components, the Python, React.js, and MySQL, becomes too complex. A customized chatbot for the Covenant University Community Mall may limit its broader applicability or adaptability without customization across different contexts.

6.**TITLE:** Enabling Autonomous Digital Marketing: A Machine Learning Approach for Consumer Demand Forecasting

**AUTHORS:** Kanika Singhal, J.N. Singh, Vishnu Sharma

#### **SUMMARY:**

This paper explores the interconnection of artificial intelligence and ML in creating a self-governing and autonomous framework that revolutionizes traditional marketing methods with regard to predicting and addressing the needs of their customers. This advanced form of data-driven decision making would be facilitated by ensemble machine learning, including but not limited to decision tree algorithms. The work uses a dataset of 6,561 tuples on the refining of cost-effective strategies maximizing profits and finding patterns in pricing data.

## **PRO**s:

It integrates AI and ML with the ability to predict demand accurately to improve decision-making abilities, and this is going to change the game in traditional marketing strategies. Ensemble machine learning and decision tree algorithms are used in precise cost-effective refinements that benefit from maximizing profits.

#### CONs:

Developing and maintaining an all-round AI/ML-driven framework requires significant leading-edge technical expertise, as its effectiveness is highly dependent upon the quality and quantity of the available data determining efficiency when it is either insufficient or provided as inaccurate data.

7.**TITLE:** Impact of AI on Social Marketing and its Usage in Social Media: A Review Analysis

**AUTHORS:** Meenu Gupta,Rakesh Kumar,Abhinandan Sharma,Anand S. Pai

#### **SUMMARY:**

This article reviews the applications and integration of AI in the social sphere and how it influences social media marketing. AI enables companies to analyze large data sets for targeted advertising and better engagement through understanding consumer perceptions, thereby enhancing efficiencies in business, cutting cost, and increasing profits through reduced risk. Additionally, AI protects user data and privacy. However, over-reliance on AI in social media interactions might harm social interactions.

## **PROs:**

AI will help automate operations and logistical networks, hence saving costs on various sectors. It enables firms to generate more targeted advertisements with high competence in the case

of consumer behavior and preference. AI provides the most robust data security and privacy protection solutions.

#### CONs:

Excessive dependence on AI for social networking interactions could make creativity limited and the communication un personalized. As useful as that would be in safekeeping data, applying AI raises once more questions about privacy because data must be gathered and scanned.

8.**TITLE:** Native Nest: An E-Commerce Platform for Promoting Tribal Products and Culture

**AUTHORS:** S. Rajendrakumar, Yashasvi Chowta, G Harshavardhan Tadikonda

#### **SUMMARY:**

The proposed study Native Nest is an online platform that supports the commerce of the Ooty District, connecting tribal artisans with customers. It provides easy access to information of QR code and the product to cut in between while making an online purchase. Such type of initiatives promote cultural heritage, empower the tribal communities, and bring socio-economic development through broader market access and cultural exchange.

### PROs:

Provides a multi-platform for tribal artisans to display their cultural heritage and access the wider market. Increasing profit margin among sellers since a direct connection with the buyers is established. It grants a smooth user experience, making the online platform accessible and engaging.

#### CONs:

High cost and logistical investment are required to develop and maintain a strong online platform. Tribal artisans may not appropriately adopt and use digital technologies as they may not be fully trained. Established online marketplaces might create problems for penetration.

9. **TITLE:** Personalized Search Engine Optimization for E-Commerce Platforms Based on Content Filtering Algorithm

**AUTHOR:** Haiefn wang

#### **SUMMARY:**

The system details the design and the construction of a personalized online shopping information filtering system that is provided with the kinds of e-commerce platforms. It offers improved user experiences by giving accurate recommendations based on user inputs. Results of performance tests show varying matching effectiveness for different types of content: text, images, videos, news. It can cater to diverse user needs, thus improving relevance and service quality.

#### **PROs:**

Tailoring Personal Recommendations to the Needs of Users on an E-commerce Site Increases Satisfaction and Engagement. SEO: Rank Algorithm Improves the Visibility of Contents and Helps Retrieve Needed Information Correctly. Keyword Matching Brings Right Recommendations Increasing Possibility of Positive Interactions.

## CONs:

The quality of recommendations would therefore be a function of the quality of the available data and the quality of the keywords. Developing and maintaining such a system would require a highly resource-intensive technical capability and related expertise. One other issue associated with capturing and analyzing user input is privacy and data security. 10.**TITLE:** Automated Categorization of Turkish E-commerce Product Reviews Using BERTurk

**AUTHORS:** Volkan Altintas, Murat Kilinc

#### **SUMMARY:**

This research automatically categorized user comments published at e-commerce sites into predefined categories using the power of machine learning algorithms and the strength of transformer-based models such as BERT. The dataset of Turkish comments related to phones, computers, and headphones gathered from Amazon.com.tr were used for this categorization. The Naive Bayes, Linear Support Classifier, Random Forest, pre-trained and fine-tuned BERT model were used in the classification process, including the BERTurk. F1-score results from classification clearly show that BERTurk-based model is the most accurate over any other model.

#### PROs:

The advanced models applied, like BERTurk, ensure maximum possible accuracy in the classification of user comments. Automatic commenting categorization will help the users quickly and easily find relevant reviews to assist them in making informed choices. Focusing on Turkish comments for their usefulness to other languages is an indication of flexibility and feasibility.

#### CONs:

Product lines, user preferences, or language usage may change, so updates and retraining may be required from time to time. Of course, gathering and processing user comments raise

S.NO	TITLE	AUTHORS	AIM	YEAR OF PUBLISHING
1.	E-Commerce for Artisans in Web Application Using Communication and Growth Technology	K. Revathi,S. Priyanka,S. Kalaivanan,V. Gobalakrishnan,M. Kamalraj,R. Ranjith	Artisans plays crucial in preserving culture, However they facing challenges to sell their products So our project offer E commerce website for sell their products.	2023
2.	Tribal Welfare Application: A System to Connect Local Artisans & Agencies of MoTA	S. Uthayashangar,S Sowmiya,K Dheebhika,V Swagatha	The project's goal is to create a smartphone application that gives tribal craftspeople a digital platform to market and display their creations by uploading pictures, opening up more business options throughout India.	2019
3.	The Effect of Using Chatbots at e-Commerce Services of Customer Satisfaction, Trust, and Loyalty(Wagner 2021)	Surjandy,Cadelina Cassandra	Chatbot have been using in E commerce website for long years. This study focus on quality factor of chatbot on customer trust, loyalty, statisy factor.	2023
4.	The Utilization of AI Extends Beyond Payment Systems to E-Commerce Store Development	Sushant Mimani,Rakesh Ramakrishnan,Piyus h Rohella,Nasmin Jiwani,J. Logeshwaran	Through Algorithm and Machine learning, This study aims to power E commerce website through AI by improving search, recommendation system and payment system.	2024
5.	Development of an E-Commerce Chatbot for a University Shopping Mall	Victoria Oguntosin, Ayobami Olomo	This research aims to develop a web based chatbot developed by React.js and python these gives smart, easy shopping	2022
6.	Enabling Autonomous Digital Marketing: A Machine Learning Approach for Consumer Demand Forecasting	Kanika Singhal,J.N. Singh,Vishnu Sharma	This study research the integrate the AI and ML to address consumers demands , for precise demand prediction and optimize digital market	2024

	I CAL C 1	M	This was a decided a	2022
7.	Impact of AI on Social Marketing and its Usage in Social Media: A Review Analysis	Meenu Gupta,Rakesh Kumar,Abhinandan Sharma,Anand S. Pai	This paper aims to review the application and integrate the AI to improve operational efficiency, boost profit and consumer behavior	2023
8.	Native Nest: An E-Commerce Platform for Promoting Tribal Products and Culture	S. Rajendrakumar, Yash asvi Chowta, G Harshavardhan Tadikonda, Sathi Lakshmi Priyatha Reddy, Mukkanti Venkata Sai Karthik, Selvanayaki Kolandapalayam Shanmugam, Senthil Kumar Thangavel	This study propose a online platform for Tribal in Ooty district for sell their heritage products to connect with buyers.	2024
9.	Personalized Search Engine Optimization for E-Commerce Platforms Based on Content Filtering Algorithm	Haifeng Wang	This article aims to build a personalized information filtering based on content and structure through a actual cases and search engine optimization, keyword matching	2024
10.	Automated Categorization of Turkish E-commerce Product Reviews Using BERTurk	Volkan Altintas,Murat Kilinc	Consumer when buying a product they make the final decision based on product content on comment based on product.	2024
11.	Transforming E-Commerce: AI Chatbots for Supercharged Customer Experiences	Ryan, Wesley Brilliant Lay, Jerry Jonathan Chia, Anderes Gui	AI chatbot can understand respond to request in real time, deliver personalized, effective service, a combined approach of UTAUT and TAM.	2024
12.	Recommendation system development for fashion design system	Hyunwoo Hwangbo, Yang Sok Kim, Kyung Jin Cha	This paper present a filtering recommendation system that implement in korean fashion selling company	2020

13.	Enhancing Customer Experience through AI-Enabled Content Personalization in E-Commerce Marketing	Vashishth, Vikas, Kewal Krishan	By investigating how AI-enabled personalization impacts customer happiness, engagement, and conversion rates, this study seeks to understand how AI-driven content personalization might improve the customer experience in e-commerce marketing.	2024
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## BASE PAPER: PROPOSED METHODOLOGY

The frontend of the Lokart mobile application was developed using the Flutter SDK, and the backend through Google Firebase to guarantee complete cross-platform compatibility along with easy performance and real-time data synchronization. The application integrates a user authentication system with multiple channels, including email, mobile numbers, and Google accounts, by having it verified via Firebase. Buyers can browse and purchase products; sellers can upload and manage their listings after authentication. The app uses the location services, whether GPS or manual inputting. This will provide users with localized products for purchase. The collaborative and content-based recommendation algorithms analyze user preferences to suggest relevant items, thus increasing user engagement and product visibility. Sellers can interact directly with the buyer through contact information shared after placing an order, hence ensuring communication smooth and transaction processes.

For added functionality, Lokart was developed to go through rigorous validation including unit testing, integration testing, user acceptance testing with artisans locally, and performance testing under a variety of network conditions. The app was consequently designed to add some

features such as mobile-based registrations to complement the issues of accessibility by users.

The platform also boasts other features such as an order tracking system in a streamlined

manner, dashboards tailored for sellers, and AI-driven recommendations for the buyers. This holistic development and testing approach ensures that Lokart enables artisans to directly reach their customers, cutting out intermediaries and using digital tools to scale the businesses. This economic growth, while streamlining artisan workflows, creates an impressive e-commerce product dedicated specifically to small-scale jewellers and artisans in communities.

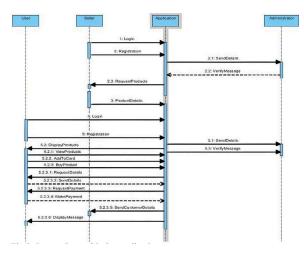


Fig 1. How user interact with user in base paper

## **METHODOLOGY:**

The objective is to get the chatterbot to classify the input from the user into predefined tags or intents and return a proper reply. The chatbot model was then spun into a Flask-based web application, which was trained by a neural network. Users can interact with the chatbot via HTTP requests to make an instant response from the input.

## a) DATA PREPROCESSING:

Data pre-processed refers to cleaning or processing of user input data and splitting it into tokens ready to feed into the model for inference. User queries are first converted to lower cases and then words are split. This results in transforming words into bag of words wherein the vocabulary is mapped with a binary vector indicating the presence of a word within the vocabulary. User inputs thus undergo cleaning and structuring processes for the model process as classification into one of tags predefined.

## b) NEURAL NETWORK DESIGN AND TRAINING:

The core model of the chatbot is a feedforward neural network, ChatBotNN, for classification of input into one of a few tags. The size of the vocabulary governs the size of the input layer. The model has two hidden layers with ReLU activation and one output layer designed to correspond to the numbers of tags. A dataset

used for training contains different patterns of tags. Cross-Entropy Loss is used for the loss function and Adam for reducing during training. After training, the model saves the weights of the model to a file: chatbot model.pth.

## C) MODEL DEPLOYMENT WITH FLASK:

The model is loaded into a Flask web application once it's fully trained and saved. The Flask app provides one API endpoint, /chatbot, taking the user input in the form of a POST request with a JSON object containing the field "user\_input". Thus, external applications, or users themselves, could directly interface with the chatbot over HTTP.D)

## D)FLASK API ENDPOINT LOGIC:

When the API receives a POST request, it retrieves the user input in tokenized form and generates the BoW representation by reapplying the same preprocessing steps that are performed on the training data.

The loaded model, with the trained weights, processes its input to predict the tag, or intent associated with the input.

The predicted tag then is matched with a defined tag inside the file of intents and an appropriate response is returned from the list of responses of the related intent. But if it does not find a match or its input is unclear, then there is an automatic fallback response-asking the user to rephrase his question.

#### E) MODEL SAVING:

Once the model is trained, its state, that is the learned weights, along with input size, hidden size and output size parameters, are saved into a file with .pth extension. A saved model can be used for inference. With this, the model can classify the inputs created by the new users without requiring training again. Saving the model allows it to be reused in deploying into an application, thereby creating the basics of a chatbot.

#### ARCHITECTURE DIAGRAM

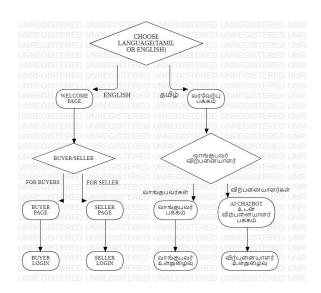


Fig 2. Basic diagramatic representation of this project

#### DISCUSSION

The above code is a part of a chatbot which is capable of interpreting the user's input as per the user's intention and acting accordingly. It has the following components:

The design of neural networks

Structure: The architecture consists of three layers and has the shape of multi-layer perceptrons (MLPs) that have:

Input layer: This layer is expected to be of the same size as the size of vocabularies (number of unique words in the dataset).

Hidden Layer(s): The second part includes two additional hidden layers that are also made of a fixed size of 8 neurons each.

Output Layer: This layer is said to be about the same size as the number of unique intent tags.

Activation Function: A ReLU is used as activation function to allow a non-linear transformation of the inputs.

Loss function: Here CrossEntropyLoss function is utilized that is suitable for multi-class problems.

## Data Cleaning and Preparation

Text Tokenization: The frst step in this case is whereby the user inputs written in the upper case are frst changed to lower case followed by word separation. Bag of Words Representation: Due to the fact that the output and target are different per sentence, the presence of every word may be represented with a boolean indicating either a 0 or a 1.

Label Encoding: This, which is also referred to as the intent tag, will be encoded into numbers.

## **Training**

In view of the first step, the dataset from which the model is trained comes from a combination of the intents JSON file.

Batch Processing: In each training set 8 samples of data can be trained for various applications training other models.

Optimization: Ada's Optimizer in this case works effectively when the learning rate parameter is set to 0: 001.

Training goes up to 100 runs although it is observed that a loss is posted every tenth running epoch for the purposes of evaluation.

## **Deployment with Flask**

In the particular both the models are saved into the file named as a chatbot\_model . pt in different directories and embedded with a flask platform .

User text is collected and sent to the appropriate model where the intended tag is determined and the model is used to reply with the message.

CORS Enabled. To facilitate the connectivity between the front-end applications and the back-end there is a feature that can come in handy.

## **Strengths**

Lightweight: This can be classified as a user friendly and effective chatbot which can also be implemented in a small scale bot.

Customizable: Other customizations include the modification of the Intents and responses because they are all embedded in on Single

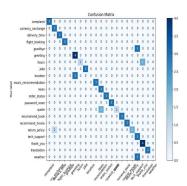
interest.json files so they are changed simply by editing the file.

Real-time Responses: According to the deployment structure, the users can expect prompt replies by making a query through the application.

#### Limitations

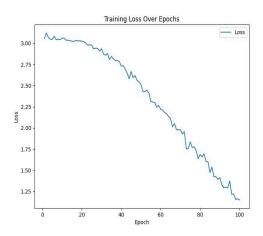
- 1. Data Dependency: The chatbot can only use the intentions listed in the intents.json fle. It cannot reply to questions outside of this range.2. Words in a Bag Representation: Context and word order are disregarded. Complex word patterns and synonyms may be hard for them to comprehend.
- 3. Fixed Responses: Because each intent has a preset list of potential responses, there is less flexibility.
- 4. Model Size: The little hidden layer size of 8 neurons may not adequately represent more complex datasets.

#### RESULT



Ashley is working on an 'E-commerce for Artisans' project with the vision of empowering artisans and craftsmen by building a digital platform that allows them to show off their handmade products globally. The initiative, thereby, would bridge a gap between brilliant artisans and end-buyers across the globe, thus

enhancing economic growth as well as carrying forward cultural heritage. The site is therefore created with the intent of providing an easily accessible interface for artisans to show their products while giving buyers a chance to discover and purchase high-quality unique pieces. Additionally, Ashley foresees adding an AI-powered chatbot on the seller page, hoping to enhance further user engagement and make communication smoother. This will give artisans the ability to respond to queries, interact, and create listings, sales, and management of customers, changing the platform into a holistic and user-friendly tool for artisan empowerment.



## **FUTURE SCOPE**

## **Global Market Expansion:**

Provide multilingual support and localized marketing campaigns to connect artisans with international buyers, promoting cross-cultural exchanges and greater access to markets.

## **Blockchain Integration:**

Utilizing blockchains for secure payment processing, transparent tracking of an order, or ascertaining the products authenticity is increased

#### **Government & NGOs Collaboration:**

Engage with the appropriate organizations for promoting traditional crafts, sourcing grants & funding opportunities, and preserving cultural heritage.

## **Augmented Reality (AR) Integration:**

Provides AR functionalities that enable customers to preview and engage with products virtually before the purchase decision-making process to foster confidence and participation.

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