**CHAPTER ONE**

**INTRODUCTION**

* 1. **Background of the Study**

With the rise of the digital economy, electronic transactions have permeated all economic sectors. The intensity of digitization – the use of computers, telecommunications, and the Internet – varies across industries. Software, computer services, financial services, and electronic media, which trade digital content and data, can be said 'fully digital'. Advanced manufacturing and professional services may be regarded as highly digital. Other sectors, where physical operations are still dominant, although increasingly information technology-enabled (IT-enabled), should be said 'moderately digital', like mining, utilities, education, commerce and so on. In this perspective, given the broad scope embraced by the word 'business', we must consider that e-business encompasses transactions and processes conducted by electronic means, without respect to the industry concerned. Manufacturing, logistics, finance, health, education, tourism and hospitality, are worth mentioning sectors where firms are consumers of e-business services. But e-business is not limited to inter-firm transactions. Individuals who buy online, get technical support on the Internet, or benefit from remote school tutoring, are involved in e-business.(Bruno 2018)

In recent times due to rise of new technology the invention of more bigger systems of technologies arises with both their negative and positive impact in the society especially with the increase rate of internet fraud from the negative side and the need of ease and better living on the positive side, the creation of an E-Commerce business web-application deals with several key aspects of study of computer science ranging from web development and certain use of languages like HTML, CSS, PHP, REACT and JAVASCRIPT for client side, while at server side, the use of Django, express.js and so much more. This project also comprises of creating nice user interface/user experience design with server-side functionality and also deals with A.I integration and management of database and use of data sets

The right use of artificial intelligence cannot only help you improve customer experience but also help the e-commerce companies in conversational commerce (Vishal dineshkumar “July-august 2020”).With this project various issues are being tackled such as, a price negotiation platform where bargaining can take place to make the market more flexible, it also brings out more competition within other E-Commerce platforms such as amazon which does not have such unique feature of bargaining. This helps in customer engagement in keeping user more engagement on the website, and also opens more business opportunities and easy location of goods with all sections of what a user might be looking for be it food, clothing, accessories, devices, and so much more needed within the environment will be included there, including plumbing and electronic services and so much more

Associated concerns in this case of study includes, data privacy and security, trust and authenticity. Safeguarding consumer privacy is a key challenge for growth of e-commerce. The dramatic technological changes advanced by online platform, big data artificial intelligence and virtual reality are transforming the way we shop online, this paradigm shift in e-commerce has only intensified the perplexities of privacy issues and(Ruwan bandara 2022) cause as online marketing begins to grow, trust and authenticity becomes more prevalent addressing issues, like fake product, not getting exactly what you ordered and fake reviews from customers and when it comes to machine learning, algorithms may exhibit bias situations which may lead to wrong situations. also during payment fraudulent activities are ongoing concerns and faulty transactions also cyber security is a concern due to maximum number of fake users inside an e-commerce platform engaging in cyber fraud

The integration of AI in e-commerce has gained attention but few integrations, integrations like machine learning for product recommendations, product availability, chatbots, bargaining gateway. A bargaining gateway in an e-commerce has been a focus of study but with few implementation possibilities as at current time at Nigeria only jiji.com has a chat platform to discuss prices and that can be made better in many more ways. and also tackling the problem of fraud detection has not been 100% achieved and terminated

Artificial intelligence (AI) enabled digital marketing is revolutionizing the way organizations create content for campaigns, generate leads, reduce customers customer acquisition costs, manage consumer experience (Patrick van Esch 2021)

* 1. **Statement of the Problem**

Emerging of new technologies and internet have selected ways for committing online business methods and ways for tackling various problems like online fraud and bargaining gateway are rarely found, hence the need to create an AI powered E-Commerce website is in demand to check the activity of scammers online and make users more comfortable with the chance to bargain products of their choice. this project plans to modify the development of an E-commerce with various features. For example, in Bingham university students in many cases have found difficulties be it in finding items of need, food, clothing, accessories, utilities. Whatever it may be, plumbing and electronic services included with encouragement of business ideas for student which make it hard to market their product due to large amount of number, so you just uploading your product will be much of ease as it’ll be also easier for students to find product with the use of machine learning for available product detection and machine learning for detecting fraudulent activities and so much more.

* 1. **Aim and Objectives of the Study**

The aim of this project is to develop an AI powered E-Commerce website with AI driven features and a bargaining gateway to defeat frequently occurring E-Commerce site challenges to solve and make it better

The specific objectives of this study are to:

1. Design an Ai driven ecommerce platform addressed to support business minds and ease of living around the environment
2. Implementing AI features for production of an e-commerce website ensuring ease for users and trust among users by detection of available goods and fraud
3. Integrating a platform for a bargaining that empowers users to fix their prices till final agreed on one encouraging user engagement and satisfaction on the platform
4. Test the implemented AI on its response and functionality
5. Evaluating the pros and cons of Ai driven features and ensure tackling various solutions for its wrong sides
   1. **Significance of the Study**

This study depends on the potential to impact digital marketing with an AI powered e-commerce website for the acting environment, and impacting various stakeholders as citizens. The development of this AI driven e-commerce platform with a bargaining gate way and chatbot can enhance the user satisfaction of members of the community. They can enjoy more user-friendly platform for online shopping. implementing features like fraud detection enhances user trust. It also makes local vendors and businesses within community to have a platform to enlarge their reach and access a larger customer base through this platform contributing to ease of living within the community. This research can stand as a competitive edge for other e-commerce sites to look into having same study around their community tailored to fixing same challenging issues around their premises implementing more Ai features for better improvement of the e-commerce system achieving the solution of ease into the system and ensuring trust and authenticity among the community and various users

* 1. **Scope of the Study**

This study focuses on any environmental community and its needs ensuring that the platform delivers the user preference of the community, the primary users of this systems include businesses minded citizens of that environment. This platform plan to offer a variety of products and services relevant to the environment. this includes foods, accessories, devices, clothing, gifts, maintenance services and other potential services offered by local vendors and all those are aimed at integrating Ai algorithms for real-time e-commerce projects for the use of goods and product detection, fraud detection to defeat frequent occurring E-commerce challenges, and chatbot with a bargaining gateway for user choice in negotiation.

* 1. **Organization of the Study**

Chapter one is the introduction of this study comprising of its background, scope, significance with included aim and objectives

Chapter two deals with the basic analysis in literature review of the project dealing with the introduction of the research topic, historical context of the topic, key concepts, methodologies used and research design and theoretical contributions

Chapter three incorporates the system/project and research design methodology which includes the approaches to research, hypothesis and research question, software development methodology and various data collection schemes

Chapter four deals with implementation and testing of the system comprising of its database, unit testing, usability testing and deeper discussions about the project

Chapter five basically rounds up the project in conclusion, with summary and various recommendations and all references

* 1. **Acronyms**

AI: Artificial Intelligence

E-Commerce: Electronic Commerce

HTML: Hyper Text Markup Language

CSS: Cascading Style Sheet

PHP: Hypertext Preprocessor

* 1. **Definition of Operational Terms**

**Client side:** this refers to the frontend also described as everything in a web application or website that is displayed or takes place on the user’s end

**Server side:** this is also referred to as backend it is the part that runs on the server instead of the client often in order to deliver dynamic contents

**Internet:**(international network) a global computer network providing a variety of information and communication facilities

**Web application:** this is a software that runs on your web browser

**Bargaining:** this is a term or process of negotiations and condition of transactions

**Authenticity:** positive quality of a system of device

**Pros and cons:** advantages and disadvantages

**Machine learning:** field of study in Artificial intelligence concerned with the training of software models using data sets

**Algorithm:** set of steps to be followed in solving problems

**References**

vishal dineshkumr soni 2022 Emerging roles of artificial intelligence in e commerce by (international journal of trend in scientific research and development)

Patrick van Esch, j Stewart Black (2021) Artificial intelligence revolutionizing digital marketing (Australasian Marketing journal 29(3) 199-203)

Ruwan Bandara, Mario Fernando, shahriar Akter (2020) privacy concerns in E-Commerce: A taxonomy and a future research agenda by (Eletronic markets 30(3),629-647, 2020)

Bruno/(2018), Jean Moulin Lyon 3 University – Lyon, E-commerce and E-business, (2-3,2018)