A STUDY OF E-COMMERCE SALES PREDICTION

DATA SCIENCE CASE STUDY

Project Report Submitted to the Bharathiar University in Partial fulfillment of the Requirements for the award of the Degree of

B.Voc. BUSINESS PROCESS AND DATA ANALYTICS

Submitted By

Jone Andrew Harris P

Reg. No. 19ECGC06

Under the Supervision of

Dr. R. RAMAMOORTHY

Guest Faculty



DEPARTMENT OF EXTENSION AND CAREER GUIDANCE
BHARATHIAR UNIVERSITY
COIMBATORE - 641046
May - 2022

Certificate

CERTIFICATE

This is to certify that the project entitled "A STUDY OF E-COMMERCE SALES PREDICTION DATA SCIENCE CASE STUDY" submitted to the Bharathiar University, Coimbatore, in partial fulfillment of the requirements for the award of the Degree of B.VOC BUSINESS PROCESS AND DATA ANALYTICS is a record of original work done by Mr.P. Jone Andrew Harris (Reg. No. 19ECGC06) during the period December 2020 to March 2021 of her study in the Department of Extension and Career Guidance, Bharathiar University, Coimbatore under my supervision and that the work has not formed the basis for the award of any Degree/Diploma/Associate ship/Fellowship or other similar title to any candidate of any university.

Dr. R. Ramamoorthy	Dr. A. Vimala
Guest Faculty	Professor & Head
Dept. of Extension and Career Guidance	Dept. of Extension and Career Guidance
Submitted for Viva – Voce Examination held on	
Internal Examiner	External Examiner

Declaration

DECLARATION

I, JONE ANDREW HARRIS P hereby declare that the project, entitled "A STUDY OF E-COMMERCE STUDY ON SALES PREDICTION DATA SCIENCE CASE STUDY", submitted to the Bharathiar University, in partial fulfillment of the requirements for the award of the Degree of B.VOC BUSINESS PROCESS AND DATA ANALYTICS, is a record of original and independent work done by me during December 2020 – March 2021 under the supervision and guidance of Dr. R. Ramamoorthy, Guest Faculty, Department of Extension and Career Guidance, Bharathiar University, and it has not formed the basis for the award of Degree/Diploma/Associate ship/Fellowship or other similar titles. It has not been submitted to any other University/Institution for the award of any degree or diploma

ACKNOWLEDGEMENT

The completion of this project work would not have been possible without the generous help and valuable advice from many people.

I am so grateful to **Dr. A. Vimala,** Professor and Head, Department of Extension and career Guidance, for her intellectual directions and constant encouragement and without her support the research would not have seen the day.

I express my deep sense of gratitude, thanks and respect to my research supervisor and guide **Dr. R. Ramamoorthy**, Guest faculty, Department of Extension and Career Guidance, for her scrupulous guidance, expertise, time and patience for supporting throughout the course of my research.

With utmost sincerity I like to record my indebtedness to the **organization** who had granted permission to carry out my work in their premises. My special gratitude goes to the respondents for their involvement amidst their engagement

.

I would like to express my sincere thanks to **Dr. Sadhasivam**, Associate Professor, **Dr. C. Dhayanand**, Assistant Professor, **Dr. J. Soonu Aravind**, **Dr.P.Dhanasekaran**, **Dr. M. Vennila**, and other guest faculties for lending hands, whenever I am need of. I wish to thank Department of Extension Career Guidance for assisting me in various insights.

I specially thank the **Office Staffs** of Department of Extension and Career Guidance for their whole-hearted co-operation.

I am especially grateful to my **Family members** for their untiring support and constant encouragement that always inspired me to keep going.

I would have been lost without my **beloved friends**, who showered their love, support, humour during the difficult phases of my life.

Above all, I thank the **Almighty** for showering grace and for giving me the strength and will power to complete this project work successfully.

TABLE OF CONTENTS

Chap No.	oter Title	Page No
	CERTIFICATE DECLARETION ACKNOWLEDGEMENT LIST OF TABLES	
I	INTRODUCTION AND DESIGN OF STUDY	
	1.1. E-commerce	1
	1.2. E-commerce Sales Prediction	2
	1.3. Data Science	4
	1.4 Data Processing	5
	1.5 Data Cleaning	5
	1.6 Data visualization	5
	1.7. Need of the study	6
	1.8. Objectives of the study	7
	1.9. Scope of the study	7
	1.10. Limitations of the study	7
II	REVIEW OF LITERATURE	7
III	RESEARCH METHODOLOGY	
	3.1. Research Deign	8
	3.2. Data Collection	10
	3.3. Period of Study	11
	3.4. Tools used	11
IV	ANALYSIS AND INTERPRETATION	
	4.1. Data Preview	12
	4.2. Data Preparation & Process	15
	4.3. Frequency Distribution Analysis	16
	4.4. Exploratory Data Analysis	18
	4.5. Seasonality and Trend	25
	4. 6. Linear Regression	26

	4.7 Model Evaluation	28
\mathbf{V}	FINDINGS SUGGESTION AND CONCLUSION	
	5.1. Summary of Findings	29
	5.2. SUGESSTION	29
	5.3. CONCLUSION	29
	5.4. APPENDIX	30
	5.5 REFERENCE	