

Strategic Forecasting of Customer Lifetime Value: Enhancing Business Insights Through Predictive Analysis

A Project Report

Submitted in partial fulfillment of the requirements for the

Award of the Degree

BACHELOR OF TECHNOLOGY

In

Computer Science and Engineering

Submitted by

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Certificate

This is to certify that the project entitled "**Strategic Forecasting of Customer Lifetime Value: Enhancing Business Insights Through Predictive Analysis**" is authentic record of work done by

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in partial fulfillment of the requirements for the award of the Degree of **BACHELOR OF TECHNOLOGY** in Computer Science and Engineering under my supervision. The results embodied in this project report have not been submitted to any other University or Institute for the award of any other degree or diploma.

Signature of Internal Guide

Signature of HOD

Signature of Principal

Signature of External

DECLARATION

We, the students of G.V.R & S College of Engineering & Technology, Guntur, Guntur District, Andhra Pradesh, here by declare that this project work titled as **Strategic Forecasting of Customer Lifetime Value: Enhancing Business Insights Through Predictive Analysis**. We, being submitted to the Department of Computer Science & Engineering of this Institute, affiliated to Jawaharlal Nehru Technological University Kakinada, Kakinada, for the award of the Degree in Bachelor of Technology in Computer Science and Engineering is a record of bonafide work done by us at G.V.R & S COLLEGE OF ENGINEERING & TECHNOLOGY and it has not been submitted to any other Institute or University for the award of any other Degree.

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LIST OF ABBREVIATIONS

ABBREVIATION	EXPANSION
CLV	Customer Lifetime Value
NBD	Negative Binomial Distribution
BD	Beta-Geometric
RFM	Recency, Frequency, Monetary_value
CRM	Customer Relationship Management
EDA	Exploratory Data Analysis
XGB	Extreme Gradient Boosting
LGBM	Light Gradient Boosting Machines