

A Course Based Project Report on  
**Time-Series Forecasting of Gold Prices Using  
Residual-Enhanced LSTM with XGBoost**

Submitted to the  
**Department of CSE-(CyS, DS) and AI&DS**

in partial fulfilment of the requirements for the completion of course  
MODELS FOR DATA SCIENCE LABORATORY (22PC2DS301)

BACHELOR OF TECHNOLOGY  
IN

**CSE-Data Science**

Submitted by

|                   |            |
|-------------------|------------|
| A.HANSIKH REDDY   | 23071A6701 |
| A.LOHITHA ABHIJNA | 23071A6702 |
| A.UDAY            | 23071A6703 |
| B.CHARAN          | 23071A6705 |
| M.KISHORE         | 23071A6731 |

Under the guidance of

**Ms.N.Madhuri**

Assistant Professor



**Department of CSE-(CyS, DS) and AI&DS**

**VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI  
INSTITUTE OF ENGINEERING & TECHNOLOGY**

An Autonomous Institute, NAAC Accredited with 'A++' Grade, NBA  
VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad – 500 090, TS, India

**December--2025**

# VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

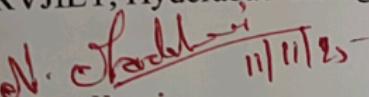
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NBA Accreditation for B.Tech. CE, EEE, ME, ECE, CSE, EIE, IT, AME, M.Tech. STRE, PE, AMS, SWE Programmes  
Approved by AICTE, New Delhi, Affiliated to JNTUH, NIRF (2024) Rank band: 151-200 in Engineering Category  
College with Potential for Excellence by UGC, JNTUH-Recognized Research Centres: CE, EEE, ME, ECE, CSE Vignana Jyothi  
Nagar, Pragathi Nagar, Nizampet (S.O.), Hyderabad - 500 090, TS, India.  
Telephone No: 040-2304 2758/59/60, Fax: 040-23042761  
E-mail: postbox@vnrvjiet.ac.in, Website: www.vnrvjiet.ac.in

## Department of CSE-(CyS, DS) and AI&DS



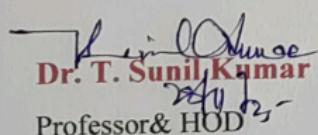
## CERTIFICATE

This is to certify that the project report entitled "**Time-Series Forecasting of Gold Prices Using Residual-Enhanced LSTM with XGBoost**" is a bonafide work done under our supervision and is being submitted by **Mr. A. HANSIKH REDDY (23071A6701)**, **Miss. A. LOHITHA ABHIJNA (23071A6702)**, **Mr. A. UDAY (23071A6703)**, **Mr. B. CHARAN (23071A6705)**, **Mr. M. KISHORE (23071A6731)** in partial fulfillment for the award of the degree of **Bachelor of Technology** in **CSE-Data Science**, of the VN RVJIET, Hyderabad during the academic year 2025-2026.

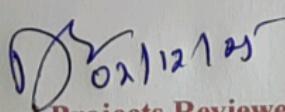
  
Ms. N. Madhuri

Assistant Professor

Dept of CSE-(CyS, DS) and AI&DS

  
Dr. T. Sunil Kumar  
Professor & HOD

Dept of CSE-(CyS, DS) and AI&DS

  
Course based Projects Reviewer

**VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI  
INSTITUTE OF ENGINEERING AND TECHNOLOGY**

An Autonomous Institute, NAAC Accredited with 'A++' Grade,  
VignanaJyothi Nagar, Pragathi Nagar, Nizampet(SO), Hyderabad-500090, TS, India

**Department of CSE-(CyS, DS) and AI&DS**

**DECLARATION**



We declare that the course based project work entitled "**Time-Series Forecasting of Gold Prices Using Residual-Enhanced LSTM with XGBoost**" submitted in the Department of **CSE-(CyS, DS) and AI&DS**, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Hyderabad, in partial fulfillment of the requirement for the award of the degree of **Bachelor of Technology in CSE-Data Science** is a bona fide record of our own work carried out under the supervision of **Ms.N.Madhuri, Assistant Professor, Department of CSE-(CyS, DS) and AI&DS, VNRVJIET**. Also, we declare that the matter embodied in this thesis has not been submitted by us in full or in any part thereof for the award of any degree/diploma of any other institution or university previously.

Place: Hyderabad.

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| <i>Hansikh.A</i><br><b>A.HANSIKH REDDY</b><br>(23071A6701) | <i>Abhijna</i><br><b>A.LOHITHA ABHIJNA</b><br>(23071A6702) | <i>uday</i><br><b>A.UDAY</b><br>(23071A6703) | <i>chavan.B</i><br><b>B.CHARAN</b><br>(23071A6705) | <i>Kishore</i><br><b>M.KISHORE</b><br>(23071A6731) |
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We express our deep sense of gratitude to our beloved Professor **Dr. T. Sunil Kumar**, Professor and Head, Department of CSE-(CyS, DS) and AI&DS, VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad-500090 for the valuable guidance and suggestions, keen interest and through encouragement extended throughout the period of project work.

We take immense pleasure to express our deep sense of gratitude to our beloved Guide, Ms.N.Madhuri, Assistant Professor in CSE-(CyS, DS) and AI&DS, VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad, for his/her valuable suggestions and rare insights, for constant source of encouragement and inspiration throughout my project work.

We express our thanks to all those who contributed for the successful completion of our project work.

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|----------------------|------------|
| Mr.A.HANSIKH REDDY   | 23071A6701 |
| Ms.A.LOHITHA ABHIJNA | 23071A6702 |
| Mr.A.UDAY            | 23071A6703 |
| Mr.B.CHARAN          | 23071A6705 |
| Mr.M.KISHORE         | 23071A6731 |