VISVESVARAYA TECHNOLOGICAL UNIVERSITY
"Jnana Sangama", Belagavi-560014, Karnataka

<u>A PROJECT REPORT ON</u>

"Analysis Of Covid Twitter Data Using BERT"

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE

BACHELOR OF ENGINEERING
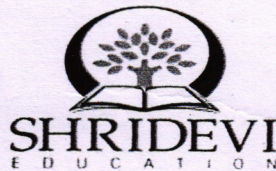IN
COMPUTER SCIENCE & ENGINEERING

<u>Submitted By</u>

Akash Kumar Singh	**[1SV19CS003]**
Amrit Gyawali	**[1SV19CS006]**
Dularchand Kalwar	**[1SV19CS028]**
Santhosh C	**[1SV19CS063]**

Under the guidance of

Mr. Renukaradhya P C

Assistant Professor, Dept. of CSE.

S.I.E.T.,Tumakuru.

PRINCIPAL
SIET. TUMKUR.

Department of Computer Science and Engineering

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Affiliated To Visvesvaraya Technological University)
Sira Road, Tumakuru – 572 106, Karnataka.
2022-2023

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that, the project report entitled "Analysis Of Covid Twitter Data Using BERT" has been successfully carried out by Akash Kumar Singh [1SV19CS003], Amrit Gyawali [1SV19CS006], Dularchand Kalwar [1SV19CS028], Santhosh C [1SV19CS063], in partial fulfillment for the award of **Bachelor of Engineering** in **Computer Science & Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year **2022-23.** It is certified that all the corrections/suggestions indicated for internal assessments have been incorporated into the report. The project report has been approved as it certifies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.

26/5/23

Signature of Guide
Mr. Renukaradhya P C
Assistant Professor,
Dept. of CSE,
SIET, Tumakuru.

Signature of H.O.D
Dr. Basavesh D B.E., M.Tech., Ph.D.,
Associate Professor & HOD
Dept. of CSE,
SIET, Tumakuru.

Signature of Principal

PRINCIPAL
SIET. TUMKUR.

Dr. Narendra Viswanath M.E., Ph.D., MIE, MISTE, MIWS., FIV.,
Principal,
SIET, Tumakuru.

External Viva

Name of the Examiners

1 Dr. Basavesha D

2 Wasim Uddin

Signature with date

26/5/23

26/5/2

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

<u>DECLARATION</u>

We, **Akash Kumar Singh [1SV19CS003], Amrit Gyawali [1SV19CS006], Dularchand Kalwar [1SV19CS028], Santhosh C [1SV19CS063],** students of VIII semester **B.E** in Computer Science & Engineering, at Shridevi Institute of Engineering & Technology, Tumakuru, hereby declare that the project work-II entitled **"Analysis Of Covid Twitter Data Using BERT"**, embodies the report of our project work carried out by our team under the guidance of **Mr. Renukaradhya P C, Assistant Professor, Department of CSE, SIET, Tumakuru** as partial fulfillment of requirements for the award of the degree in **Bachelor of Engineering in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi**, during the academic year **2022-23**. The project has been approved as it satisfies the academic requirements with respect to the project work.

Place: Tumakuru

Date: 26/05/2023

Student Name & Signature

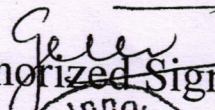|		
Akash Kumar Singh	[1SV19CS003]	_(signature)_
Amrit Gyawali	[1SV19CS006]	_(signature)_
Dularchand Kalwar	[1SV19CS028]	_(signature)_
Santhosh C	[1SV19CS063]	_(signature)_

PRINCIPAL
SIET. TUMKUR.

Date: 22/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. AKASH KUMAR SINGH** bearing USN **1SV19CS003** Student of **Shridevi Institute of Engineering & Technology** has successfully completed his Project Work titled "Analysis Of Covid Twitter Data Using BERT".

We wish every success in his career.

For ShriTEK Innovations

PRINCIPAL
SIET. TUMKUR.

Authorized Signature

Date: 22/05/2023

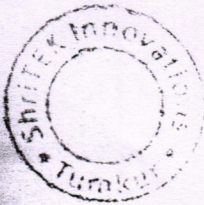## TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. AMRIT GYAWALI** bearing USN **1SV19CS006** Student of **Shridevi Institute of Engineering & Technology** has successfully completed his Project Work titled "Analysis Of Covid Twitter Data Using BERT".

We wish every success in his career.

For ShriTEK Innovations

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Authorized Signature

Date: 22/05/2023

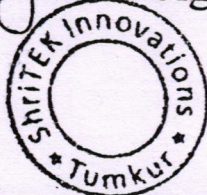## TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. DULARCHAND KALWAR** bearing USN **1SV19CS028** Student of **Shridevi Institute of Engineering & Technology** has successfully completed his Project Work titled "Analysis Of Covid Twitter Data Using BERT".

We wish every success in his career.

For ShriTEK Innovations

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Date: 22/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. SANTHOSH C** bearing USN **1SV19CS063** Student of **Shridevi Institute of Engineering & Technology** has successfully completed his Project Work titled "Analysis Of Covid Twitter Data Using BERT".

We wish every success in his career.

For ShriTEK Innovations

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○ Skill & Career Development Centre, Room No. 3, Ground Floor,
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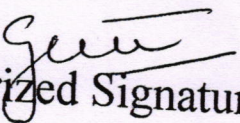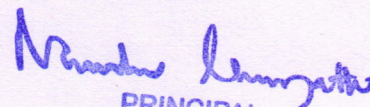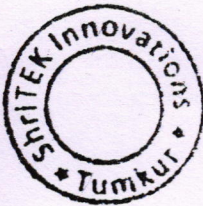✉ : shritekinnovations@gmail.com

Date: 22/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. SAHANA SHARANAPPA GULARADDI** bearing USN **1SV19CS060** Student of **Shridevi Institute of Engineering & Technology** has successfully completed her Project Work titled "Air Pollution Prediction Using Deep Learning".

We wish every success in her career.

For ShriTEK Innovations

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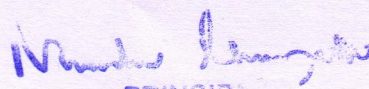SIET. TUMKUR.

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ABSTRACT

This project focuses on the analysis of Covid-related Twitter data using BERT (Bidirectional Encoder Representations from Transformers). Twitter has emerged as a valuable source of real-time information during the Covid-19 pandemic. Leveraging natural language processing and machine learning techniques, we aim to extract insights from a diverse corpus of Covid-related tweets.
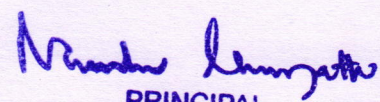
The project involves collecting a comprehensive dataset of Covid-related tweets and applying preprocessing techniques for data cleaning and normalization. Fine-tuning the BERT model on this dataset enhances its performance for Covid-related tweet analysis.

We conduct sentiment analysis to understand the overall sentiment toward Covid-19, topic modeling to identify prevalent themes, and information extraction to extract relevant entities and phrases. BERT embedding enables semantic similarity measurements and clustering analysis of tweets.

The results highlight the efficacy of BERT in extracting valuable insights from Covid-related Twitter data. Sentiment analysis provides an understanding of public sentiment, while topic modeling reveals prevalent themes. Information extraction identifies key entities and phrases associated with Covid-19, aiding trend tracking.

This project showcases the potential of leveraging advanced natural language processing techniques, specifically BERT, for large-scale Twitter data analysis during public health crises. The insights gained assist in monitoring public sentiment, identifying trends, and aiding decision-making related to health crisis management and communication.

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