

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama”, Belagavi-560014, Karnataka



CGV MINI PROJECT REPORT

ON

“Wind Energy”

***SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
CGV LAB***

**BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE & ENGINEERING**

Submitted By

USHA BN[1SV20CS053]

Under the guidance of

Mr.Renukaradhya P.C B.E., M.Tech.,

Assistant Professor, Dept. of CSE.



**SHRIDEVI
EDUCATION**

Narash Channappa
**PRINCIPAL
S.I.E. TUMKUR.**

Department of Computer Science and Engineering

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Affiliated To Visvesvaraya Technological University)

Sira Road, Tumakuru – 572106, Karnataka.

2022-23



Sri Shridevi Charitable Trust (R.)
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Sira Road, Tumakuru - 572 106. Karnataka.



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Phone: 0816-2212629 | Fax: 0816-2212628 | Email: info@shrideviengineering.org | Web: http://www.shrideviengineering.org

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that, Computer Graphics and Visualization Mini-Project of entitled "Wind Energy" has been successfully carried out by Usha BN [1SV20CS053], in partial fulfillment for the CGV Lab 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 in the report. The Mini- Project report has been approved as it certifies the academic requirements in respect of Mini-Project work prescribed for the Bachelor of Engineering Degree.

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Signature of Guide

Mr. Renukaradhya P.C B.E., M.Tech.,
Assistant Professor,
Dept. of CSE,
SIET, Tumakuru.

Nimish Kumar
PRINCIPAL
SIET, TUMKUR.

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4/7/23

Signature of H.O.D

Dr. Basavesha D M.Tech, Phd
Associate Professor & HOD
Dept. of CSE,
SIET, Tumakuru.

Name of the Examiners

1. *Harish B.M*

2. *Renukaradhya P.C*

Signature with date

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DECLARATION

I, Usha BN [1SV20CS053], student of VI semester **B.E** in Computer Science & Engineering, at Shridevi Institute of Engineering & Technology, Tumakuru, hereby declare that, the Mini-Project work entitled "**Wind Energy**", embodies the report of our Mini-Project work carried out under the guidance of Mr. **Renukaradhya P.C.**, Assistant Professor, Department of CSE, SIET, Tumakuru as partial fulfillment of requirements for the CGV Lab in **Bachelor of Engineering in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi**, during the academic year **2022-23**. The Mini-Project has been approved as it satisfies the academic requirements in respect to the Mini-Project work.

Place: Tumakuru

Date: ..4/7/23

Usha BN

Student Name & Signature

USHA BN
[1SV20CS053]

Nenukaradhya P.C.
PRINCIPAL
SIET, TUMKUR.

ABSTRACT:

Renewable energy sources have gained significant attention in recent years due to their potential to mitigate climate change and reduce dependence on fossil fuels. Among these sources, wind energy has emerged as a promising and rapidly growing solution. This abstract provides an overview of the key aspects surrounding wind energy, including its generation, benefits, challenges, and future prospects.

Wind energy is obtained by converting the kinetic energy of moving air into electricity using wind turbines.

These turbines consist of blades mounted on a rotor, which spins as the wind flows past, driving a generator to produce electrical power.

Wind farms, comprising multiple turbines, are strategically located in areas with consistent and strong winds, such as coastal regions and open plains

Looking ahead, the future of wind energy appears promising.

Technological advancements continue to improve turbine efficiency, reduce costs, and enhance reliability.

Offshore wind farms, harnessing stronger and more consistent winds, are gaining momentum globally.

Integration of artificial intelligence and smart grid technologies can optimize wind farm performance and facilitate efficient grid management.

Moreover, research and development efforts focus on innovative designs, such as vertical-axis turbines and airborne wind energy systems, to further enhance the efficiency and scalability of wind energy generation.

In conclusion, wind energy holds immense potential as a clean, renewable, and economically viable solution for sustainable power generation.

Overcoming challenges related to intermittency and addressing public concerns through effective planning and stakeholder engagement will be key to its widespread adoption. With continued advancements and supportive policies, wind energy is poised to play a pivotal role in the global transition to a low-carbon future

Technology used

Graphics Software: various software packages are available for creating computer graphics, including 3D modeling and animation software,

Computer Hardware: A powerful computer with a good graphics card and sufficient storage capacity is required to run graphics software, C++ and python languages are used in graphics.

Nanda Senyati

PRINCIPAL
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