

A PROJECT REPORT ON

## **Fabrication of E-Cycle**

A project report submitted in partial fulfillment of the requirements for the award of the

Degree of

### **BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING**

#### **SUBMITTED BY**

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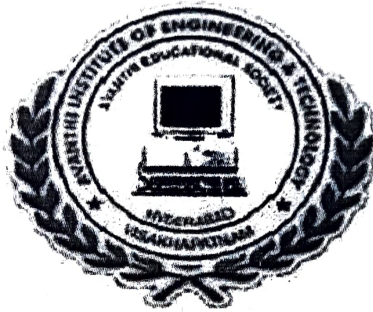
**DEPARTMENT OF MECHANICAL ENGINEERING**



**AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**(PERMANENTLY AFFILIATED TO JNTU-KAKINADA, ACCREDITED BY NBA**  
**& NAAC, APPROVED BY AICTE, RECOGNISED BY UGC 12f & 2b)**  
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**DEPARTMENT OF MECHANICAL ENGINEERING**  
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**CERTIFICATE**

This is certify that the project work entitled **“Fabrication of e-cycle”** is a bonafied record of work done by Alla Ravi Shankar (19815A0302), Akkireddy Jagadeesh Kumar (19815A0301), Gandepalli Naresh (19815A0314), Asgar Khan (18811A0304), Kovvada Manikanta (18811A0315) in partial fulfilment of the requirement for the award of Bachelor of technology in MECHANICAL ENGINEERING by Jawaharlal Nehru technological university, Kakinada During the year 2021-2022.

  
PROJECT GUIDE

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## **ABSTRACT**

The objective of the project is to Design and Analysis of the E – cycle. Electric bicycles have been gaining increasing attention worldwide, Technology is developing fast and every day new developments are being done. Technology is a boon to many but it has its own limitations like driving a conventional I.C. engine bikes is expensive and also damage the environment. Also I.C. engine bikes require regular maintenance and operating cost is comparatively high. E-bikes is a possible solution to this problem but initial cost to buy one is much high. This project aims to mitigate the above listed problems by designing and converting an I.C. engine bike to an E-bike which will be driven by an electric motor with simplified mechanical chain drive system eliminating gear mechanism. Present work will be limited to design and Analysis of Complete frame structure.

This project intends to provide brief information about various components in an electric moped and to propose an optimal design of Frame. In order to attain optimal design, a conventional moped chassis is identified as a reference and according to the specifications and features of an electric vehicle, this conventional chassis is modified. Model is designed in CATIA and simulation was performed in ANSYS giving a desired fabricated model which is eccentric and light-weight.