

**PEDAL MACHINE POWERED BY HUMAN ENERGY  
'BICYCLE GENERATOR'**

Thesis presented in partial fulfillment for the award of the

Bachelor in Electrical Engineering (Hons)

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## **ABSTRACT**

The purpose of this project is to design the pedal machine powered by human energy to convert from mechanical power into electrical power [1] using alternator which directly connected to the bicycle's rim. Alternator is a generator that can generate a voltage as its pulley rotates [2]. Through cycling action, it produces energy which is turned into the electricity necessary to charge the battery. The battery plugs into a power inverter [3] then supply and deliver a consistent power to the electrical devices. The project also capable to help the cyclist to maintain the health which burnt the user's calories [4].

**Keywords - Bicycle, alternator, battery, inverter.**

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# **1 CHAPTER I: INTRODUCTION**

## **1.1 PROBLEM STATEMENT**

The world globally needs a device capable of powering the electric and electronic devices by using renewable, sustainable energy sources [5]. Based on the recent survey by World Energy Council (WEC), state that the former Secretary General of United Nations, Kofi Annan, quoted and suggest to make clean energy supplies accessible and affordable, which need to increase the use of renewable energy sources and improve energy efficiency. He also issued the fact that people in the developed countries use far more energy per capita than those in the developing world [6]. From that matter, raise an idea of designing and building a device that converts mechanical power into electrical power which based on a pedal machine powered by human energy and store the power output into battery. This device can be used to power many other appliances; for example - bulbs, televisions, radios, laptop [7] and any other electrical powered appliances.