

## Assignment :- 1

Define a problem statement and give a brief Executive Summary Snapshot.

- A) Executive Summary
- B) Project Summary
- C) Project Scope

### A. Executive Summary

The project aims to increase the efficiency of electric bikes by installing an innovative sensor-based auto-charging system. It will increase the convenience for the users and insure that the bike is always ready for use. The project involve the development and integration of sensors that trigger the charging process as well as necessary adjustments to the bike's electric system.

### B. Project Description

The project focuses on integrating automatic charging system in electric bikes using advance sensor technology. The sensor will detect when the bike is turned on and connected to a charging station, starting the charging process without user intervention. The system will be designed to work with existing electric bike models and will include a user interface to monitor charging status. The project will include hardware development, software integration and rigorous testing to ensure reliability and functionality.



### C. project scope

#### 1) Hardware Development :-

Design and prototype sensor and charging system components with necessary wiring and connectors.

#### 2) Software Integration :-

Will develop software to manage sensor inputs, charging initiation and user notifications.

#### 3) Compatibility Test :-

You will create an app that shows how much it has charged and how much time it will take to fully charge and how many kilometers your bike will travel in a full charge.

#### 4) Installation and Deployment :-

Create a standardized installation procedure for the retrofit kit and train technicians for installation. It will be engineered in such a way that any common man can use it.

#### 5) Evaluation and

#### 5) User Training and Support :-

Provide documentation and support users to operate and maintain the auto charging system.

The Deadline of this project is 7 months.