Bike Taxi Meter

**Brief description**

In order to rent a bike an individual like you and I face a lot of problems for the fare calculation. Hence we are here with the bike taxi meter which calculates the fare in very honest and fair manner.

To calculate the fare we basically need the distance and the time of travel. For distance we require an odometer. Bike come with an inbuilt odometer but we only require the distance travelled in a particular trip. So we have made our own odometer which works on Hall Effect.

The distance is calculated by multiplying the number of revolutions of the front tire with the diameter of the tire.

Distance fare can be calculated by multiplying with the help of suitable factor. Arduino has inbuilt timer with which time fare too can be found.

An additional feature of this meter is it also includes the number of time the rider is riding rashly this is achieved with the help of number of times the vehicle moves from economy to power mode and multiplying with a suitable factor which becomes the additional fare for the meter.

The whole setup can be installed in a bike along with the switch on and switch off button.

An additional safety feature of this meter is if the rider tries to reduce the fare by removing the usual power supply a backup power supply is also present.

We have also used a GSM module through which we are sending the final fare to the owner and displaying the fare through a display on a screen.

**Applications:**

* Used as a bike taxi meter.
* By adding GPS more features can be added with even more security.

**Components used**

1. Arduino Uno board
2. Arduino IDE
3. GSM module
4. Display
5. Hall sensor
6. Servo motor
7. Arduino Nano board
8. Connecting wire