VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI – 590 018

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PROJECT REPORT

ON

"Design and Fabrication of Button Operated Gear Shifting System in Two Wheelers"

Submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

Submitted by:

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ESTD: 2002 20 YEARS Academic Excellence

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CERTIFICATE

his is to certify that the Project Work entitled **"Design and Fabrication of Button Operated Gear Shifting System in Two Wheelers"** is carried out by **Ms Meghana G (1SV19ME401), Mr Sharath C (1SV19ME404)** and **Mr Mohamed Roshan D (1SV18ME005)** bonafide students of the **Department of Mechanical Engineering** in partial fulfillment of the requirements for the award of the degree of **Bachelor of Engineering** in **Mechanical Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year **2021–22**. It is also certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

(Mr B H Vasudevamurthy)	(Mr B H Vasudevamurthy)	(Dr Narendra Viswanath)
Project Guide	**Head of the Department**	**Principal**

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ABSTRACT

The world is moving towards a cleaner and sustainable technology, an electric car is one of them. Nowadays most of the electric cars are using manual transmission which can be converted in to semi-automatic and automatic transmission by installing an electro-pnuematic shifting mechanism. The mechanism is achived by using a pneumatic cylinder, sensors, solenoid valves, air reservoir, microcontroller and paddle shifter. The gears can be shifted either by the driver or an electronic control unit (ECU) on a real time basis. ECU takes input from the paddles attached behind the steering wheel or vehicle speed sensor and the gear is shifted by the pneumatic cylinders, controlled by a control unit through the solenoid valves.

In the present work an attempt has been made to design and fabricate a gear shifting system by replacing the mechanical devices such as pneumatic cyclinder and solenoid valves by electronic devices. It is planned to have sloenoid, relays and push button switches and a battery.

The expected outcome of proposed device is that it should be easier to shift the gears compared to manually operating using a lever mechanism. This device may ease the gear shifting process in heavy traffic roads and driving in hill stations where the gears have to be changed very often. Also, this device should be helpful to physically challenged persons.

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