

**VISVESVARAYA TECHNOLOGICAL
UNIVERSITY,BELAGAVI- 590 018**



AMICRO PROJECTREPORTON

“Hands Free Umbrella Bag ”

Submitted By,

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ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

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CERTIFICATE

This is to certify that the Micro-Project entitled "Hands Free Umbrella Bag" has been Successfully Completed

By

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The bonafide students of **Department Mechanical Engineering, Alva's Institute of Engineering and Technology**, affiliated to **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**, during the academic year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of Micro-Project work prescribed for Bachelor of Engineering.


Mr. Veerendra Kumar
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ABSTRACT

An umbrella is much needed product in rainy season. The problems associated with umbrellas is that it needs to be carried separately along with your other stuff and it occupies one hand all the time. Also umbrellas are to be kept separately in buckets which leads to people forgetting about umbrella in many cases and losing them.

Well we here design a smart solution to all umbrella related problems with a customized solution. Our proposed device is a bag pack that has an integrated umbrella with auto rain sensing. The umbrella does not need to be carried separately and both hands of the user are free even when the umbrella is open. Even opening the umbrella is an automatic operation with no manual efforts needed. This rain sensing modern umbrella provides the following advantages: Hands free usage Bag attached umbrella no need to carry separately No risk of forgetting or losing umbrella Automatic opening closing on button press Rain sensing feature for automatic opening Protects from rain as well as sunlight as needed The modern umbrella consists of DC motorized system with transparent plastic cover with rain sensor and Arduino controller integrated in a backpack. The rain sensing umbrella system is a unique modern day gadget that changes the way umbrella is used.

The rain sensor is used to detect rain fall. If rainfall is detected, the sensor sends trigger to the arduino controller. The arduino now operates the motors to open the small umbrella shed to protect user from rain. Also umbrella opening and closing operations can be triggered by a button press by the user.