

KASS UMBRELLA

Team Details

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Project Objective

Implementation of simple backpack umbrella using Arduino which opens and closes by single press of button. Our project can turn your ordinary bag into a hybrid bag by having an umbrella attached to it.

Existing systems

Traditional Umbrella
Hats/caps
Raincoat

User requirement

Arduino UNO x 1	Servo motors
Button	Servo driver
Battery	G.I.Wires
Umbrella cloth	Wooden sticks
Backpack	

Gaps in the existing system

TRADITIONAL UMBRELLA:

- We have to carry it everywhere irrespective of the weather.
- An Umbrella can only help one person from soaking wet.
- Often people forget it.

RAINCOAT:

- Covers entire body of a person but not his accessories.
- Takes time to wear.
- Useless once torn.

HATS/CAPS:

- Only protects the head from soaking wet not the entire body.
- Wearing a head cap for an extended period of time can damage your hair and trap its natural oils, making them dry.

Issue

Nowadays due to changing climatic conditions it's hard to predict the weather conditions. Given such unpredictable weather it's hard to take precautions every day. We have to carry an umbrella always irrespective of the weather. Carrying it in hand every time is also a problem. This problem is for students and working people. So, there is a need of an automatic umbrella which doesn't required to be held in hands.

Methodology



- Our proposed device is a bag pack that has an integrated umbrella. 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.
- As the rain starts with just a single click of push button, the umbrella that is attached to the bag opens.
- The modern umbrella consists of Servo motorized system with transparent plastic cover with push button and Arduino controller integrated in a bag pack. The push-button umbrella system is a unique modern-day gadget that changes the way umbrella is used.
- The push-button is used to protect us from rain fall. If there is rainfall, then push the button which then sends trigger to the Arduino controller. The Arduino now operates the motors to open the small umbrella shed to protect user from rain.