MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
(AUTONOMOUS)
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Pulladigunta(V), Vatticherukuru(M), Guntur(Dt), A.P.

TEAM NAME : WIRELESS WARRIORS

PROJECT NAME : WEATHER RESPONSIVE CROP PROTECTION

SUBMITTED BY

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Introduction :

After cropping,farmers spread red chilli or tobacco or paddy on open ground to dry them.However,sudden rain or hail can damage the crop, leading to wastage.

This challenges faced by Farmers.

Objective :

To develop an automated system that can detect rain and wheather changes,

protects the crop and redirects the rain water efficiently.

PROBLEM STATEMENT :

1 . The key challenges faced by farmers emphasizing the need for an innovative solution.

2 . Weather uncertainty can cause crop damage and loss.

3 . Labour – intensive manual covering.

4 . Reduce yield and quality.

5 . Wheather related stress affects crop quality.

6 . Increased farmers stress and migration.

7 . Decreased competitiveness in global markets.

Existing solution :

Manual covering : Farmers can use tarps , sheets or other materials to cover crop plants during rain or extreme weather.

Green houses : Expensive and often unaffordable for small – scale farmers.

Shade nets : Provide partial protection but not effective against heavy rain or hail.

Proposed solution :

1 . Automated covering and uncovering.

2 . Real-time rain detection.

3 . Adjustable sensitivity for varying rain intensities.

4 . Water-resistant and UV-resistant covering material.

5 . Energy efficient power supply.

Value propositions :

"Protect crops from Unpredictable Weather with our automated covering system."

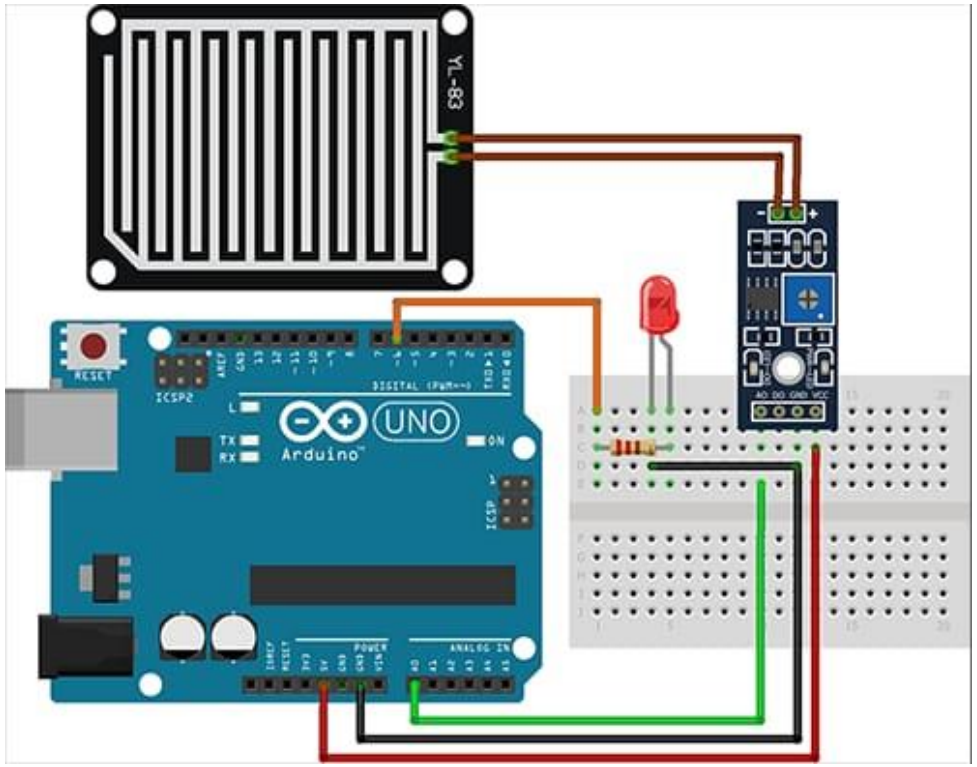
1 . Increased yield and quality.

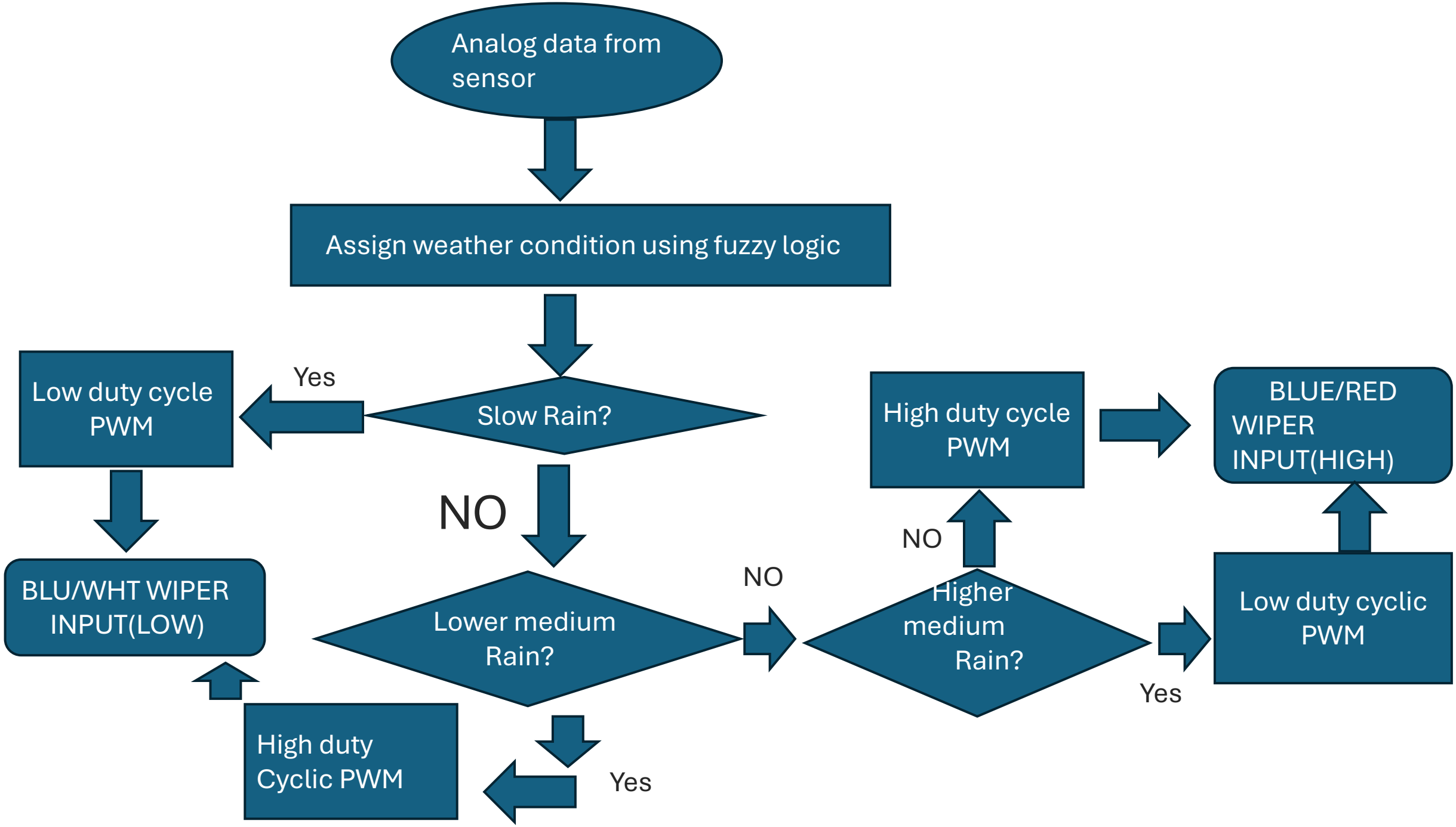
2 . Reduced crop damage and loss.

3 . Labour savings.

4 . Improved weather resilience.

5 . Enhanced crop protection.




Analog data from sensor
Assign weather condition using fuzzy logic
Slow Rain?
Yes
Low duty cycle PWM
BLU/WHT WIPER INPUT(LOW)
NO
Lower medium Rain?
NO
High duty Cyclic PWM
Yes
Higher medium Rain?
NO
High duty cycle PWM
Yes
Low duty cyclic PWM
BLUE/RED WIPER INPUT(HIGH)

Conclusion :

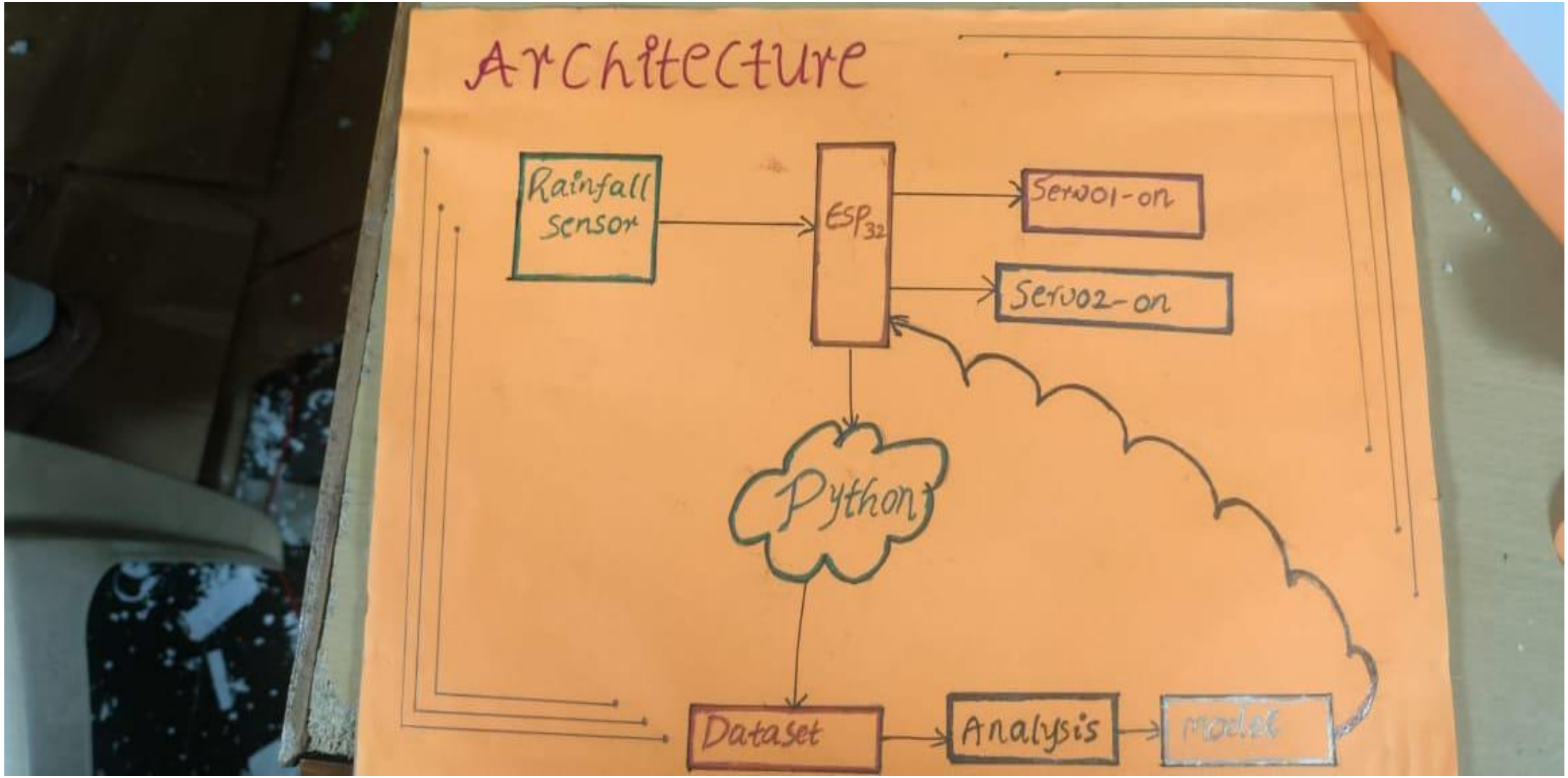
I . The sensor machine provides an automated, cost-effective, and practical solution to a common problem faced by farmers.

II . It also ensures sustainable water management by directing rainwater to the ground.

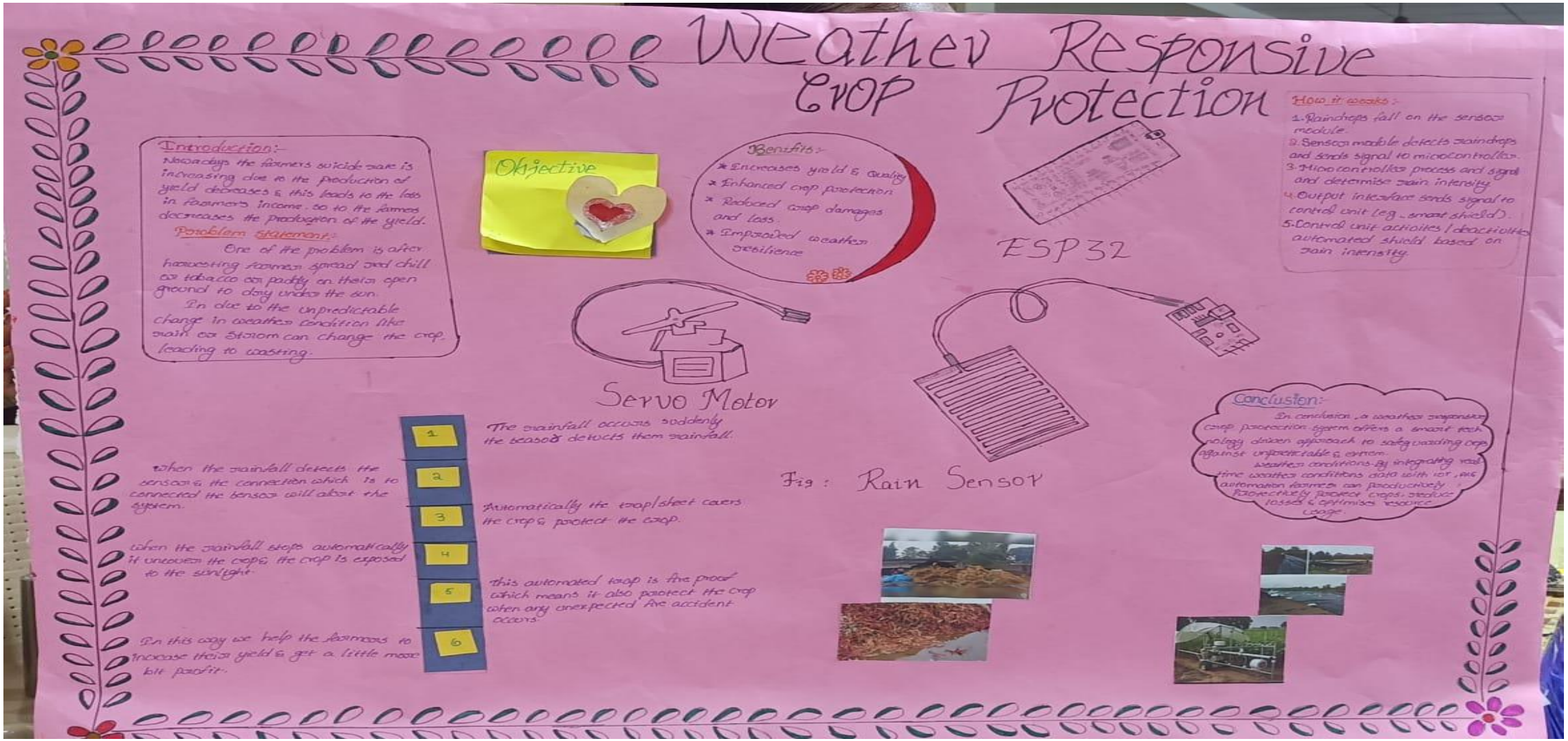
III . Automated covering and uncovering ,minimizing crop damage and loss.

IV . Scales to suit various farm sizes and and infrastructures.NO

ARCHITECTURE :



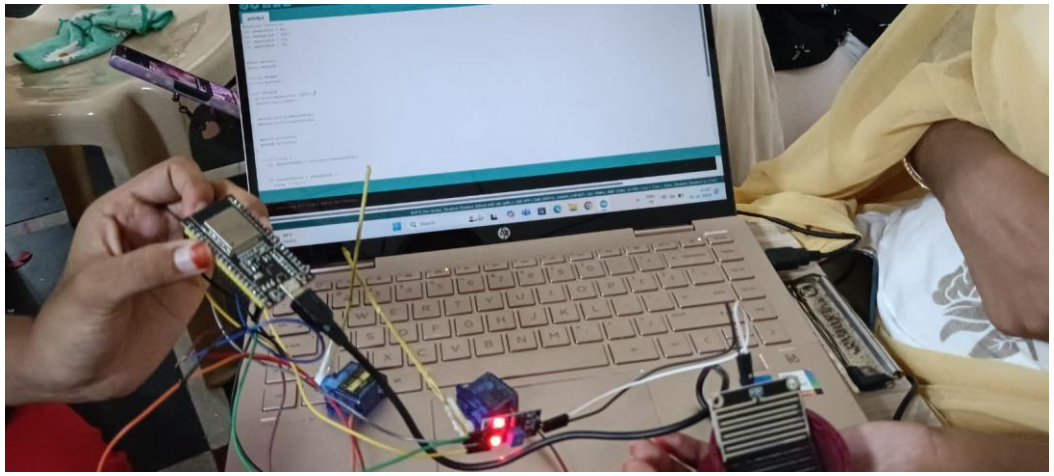
POSTER PRESENTATION :

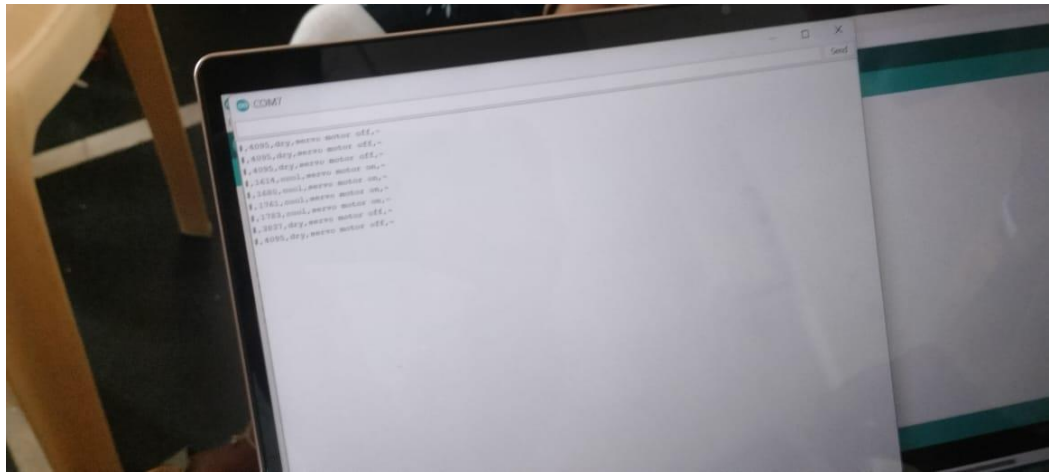


TEAM :


K.Meghana
N.Navya
K.Rajeshwari
T.Mounika
WELCOME
TEAM:
WIRELESS
WARRIORS
ATCHitecture

Hardware components :





Thank You