# MICROPROCESSOR & EMBEDDED SYSTEM PROJECT PROPOSAL FORM

SEMESTER: Fall 2022-2023

PROJECT TITLE: IoT – Based Smart Poultry Farm & Fish Farming System.

Survey to develop a process for complex engineering problems considering cultural and societal factors (use pie chart):
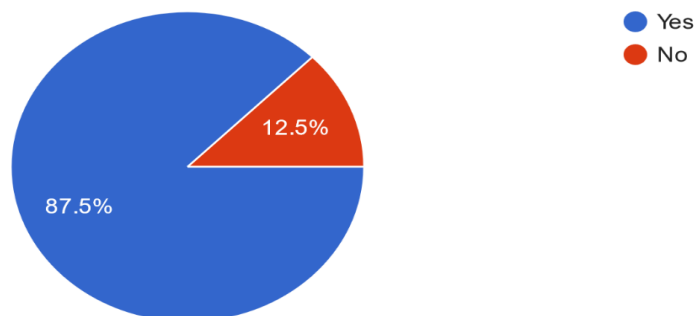
What do you think what makes farming difficult for a student ?
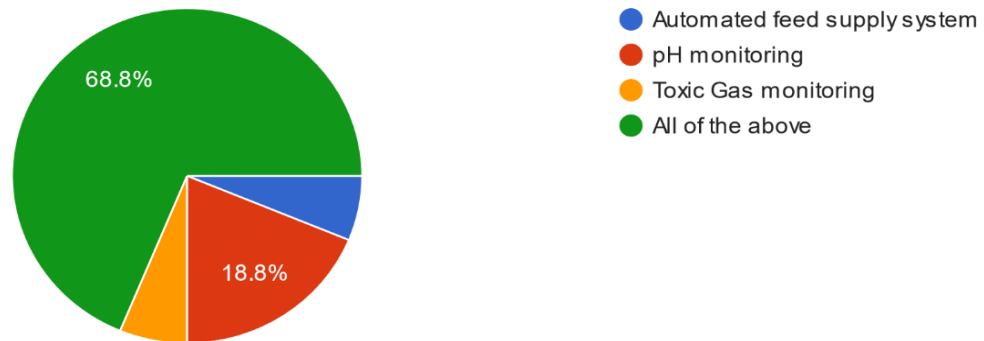16 responses

- Time management
- Maintenance
- Not having the knowledge

75%
18.8%
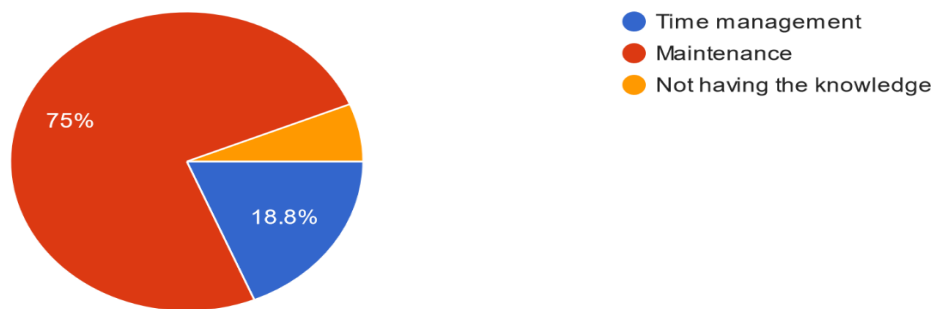
Did you ever thought about implementing technologies in agriculture ?
16 responses

- Yes
- No

12.5%
87.5%

What kind of automated feature you would like to see in fish farming?

16 responses

- Automated feed supply system
- pH monitoring
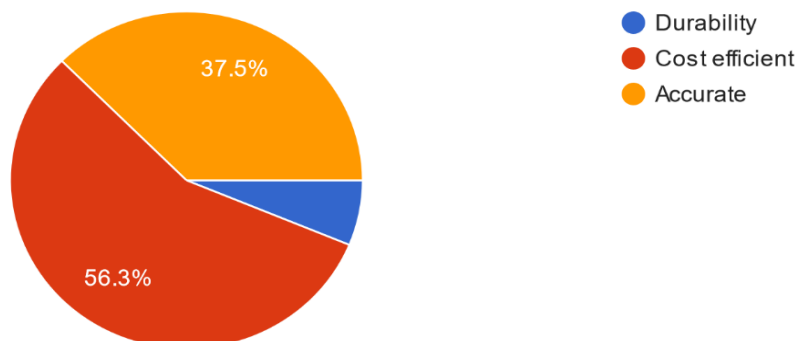- Toxic Gas monitoring
- All of the above

68.8%

18.8%

Do you think by combining this two agriculture sector together with a IOT based system can make a great impact in our agriculture?

16 responses

- Yes
- No
- Maybe

12.5%

81.3%
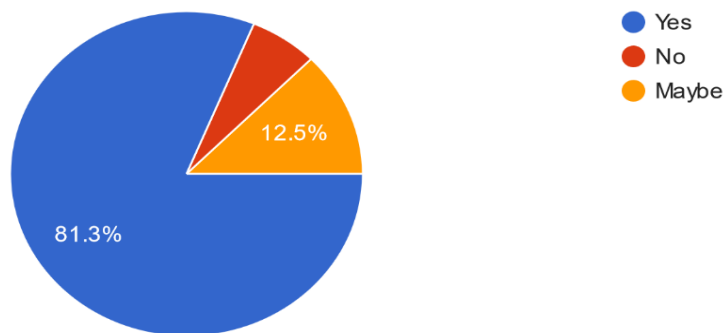
If we ever make a system like this what will be the most important thing?

16 responses

- Durability
- Cost efficient
- Accurate

37.5%
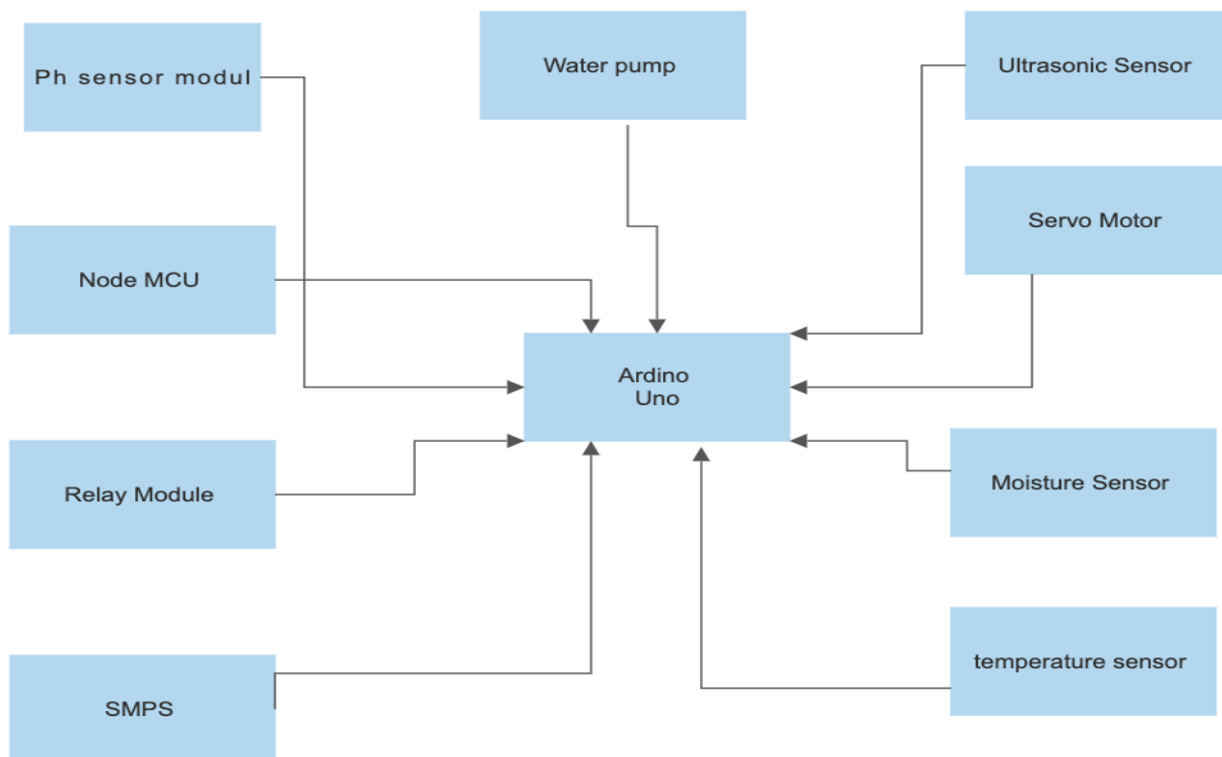
56.3%

GOALS AND BENEFITS OF THE PROJECT:

We all know that agriculture is one of the largest sectors in our country. But it is a big reason to worry that the people of Bangladesh still use traditional farming. Also, some students want to do farming, but for lack of time or some issue, they need more time. So here we will implement an IoT-based system using Arduino Uno that will help to farm. The main goal of this project is

1. To create an automated system that will maintain poultry and fish farms at the same time
2. This system will automatically provide feed and water to chickens and feed to fish.
3. Temperature control in poultry farm.
4. pH control in a fish farm.

So, this project significantly reduces one's time and effort in farming. Also, there is some benefit

1. Can monitor and control farms virtually
2. Chicken and fish will grow in a controlled environment so that the production rate will rise.

EXPERIMENTAL BLOCK DIAGRAM:

PROJECT TIMELINE (GANTT CHART):

Project Timeline
Gantt Chart

TASK / PROCESS	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8
Project Topic Selection	■							
Website Layout Design & Making Proposal		■						
Strategic Planning			■					
Perform Data Collection				■				
Proposal Submission & Presentation					■			
Build Project						■		
Writing Project Report							■	
Project Presentation & Showcasing								■

REFERENCES:

1. Llaria, A.; Terrasson, G.; Arregui, H.; Hacala, A. Geolocation and monitoring platform for extensive farming in mountain pastures. In Proceedings of the 2015 IEEE International Conference on Industrial Technology, Seville, Spain, 17–19 March 2015.

2. C. Kamienski, J.-P. Soininen, M. Taumberger, R. Dantas, A. Toscano, T. S. Cinotti, R. F. Maia, and A. T. Neto, ''Smart water management platform: IoT-based precision irrigation for agriculture,'' Sensors, vol. 19, no. 2, p. 276, 2019.

3. T. Ojha, S. Misra, and N. S. Raghuwanshi, ''Wireless sensor networks for agriculture: The state-of-the-art in practice and future challenges,''Comput. Electron. Agricult., vol. 118, pp. 66–84, Oct. 2015.

4. O. Elijah, T. A. Rahman, I. Orikumhi, C. Y. Leow, and M. N. Hindia, ''An overview of Internet of Things (IoT) and data analytics in agricul-ture: Benefits and challenges,'' IEEE Internet Things J., vol. 5, no. 5, pp. 3758–3773, Oct. 2018.

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COMMENTS BY COURSE TEACHER:

GROUP MEMBERS

(Maximum 8 students are permitted to carry out a single Project. However, depending on the capability of the students, 4 students may be allowed but not less than that)

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REMARKS (for OFFICE use only)