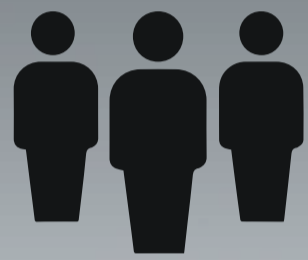


FRONTIERS CHAMPIONS 2022

PROPOGATE POSITIVE IMPACT OF IOT IN WATER REUSE THROUGH FRONTIER

TODAY'S WASTE WATER IS TOMMOROW'S LIFE SAVER

SAVE OUR FUTURE BY REUSING WATER



OPEN TO ALL
UNIVERSITY STUDENTS
WITH SKILL IN
IoT
HANDS ON
WATER PURIFICATION

3 STUDENTS
PER GROUP

SUBMISSION DEADLINE FOR
ENTRY PROPOSAL

1st MAY 2022
MALAYSIA TIME GMT +8



PRIZES WORTH UP TO
£750
WILL BE GIVEN OUT.



SUBMISSION AND INQUIRY PORTALS
frontierchampion2022@gmail.com
<https://sites.google.com/view/frontierschampions2022/>



EXCITED EVENTS COMING UP!

CALL FOR
ENTRIES

1st MAY
2022

1st JUNE
2022

1st SEPT
2022

DEADLINE FOR
ENTRY PROPOSAL
SUBMISSION

FINAL
COMPETITION

FINAL
PRESENTATION

PRELIMINARY STAGE

- Call for participating entries, Submit proposal for screening.
- Use a list of given IoT devices, design in detailed a wastewater harvesting system capable of monitoring and purification.
- 5 selected groups from each organization will be selected to the next stage.

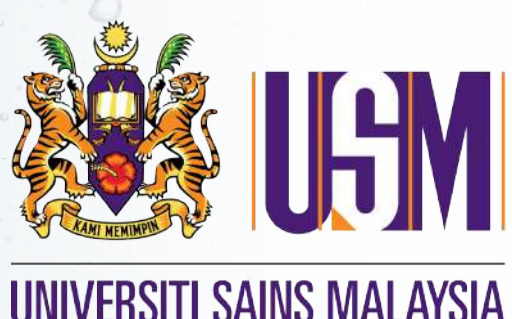
PREPARATION TO FINAL

- Each group will be given a set of IoT device with respectively desired sensors.
- A series of super interesting training sessions and workshops will be held with experienced trainers.
- Each group can start to set up and design each's wastewater harvesting system.

FINAL COMPETITION

- With every group's special system, wastewater harvesting, monitoring and purification takes place.
- Data and information such as image and videos along the entire project has to be fully captured and submitted.
- A final presentation will be needed to present the project outcomes.

HOST BY



IN COLLABORATION WITH

TEKMANN S.A. DE C.V.
UNIVERSITY OF WEST LONDON
MONASH UNIVERSITY
UNIVERSITY OF CAPE TOWN
COVENANT UNIVERSITY

1. The competition is to design, and fabricate (in final stage) a waste water harvesting system, which will be coupled with a IoT system for monitoring and control purpose. Next, the waste water collected would need to went thru a series of purification steps, and been proven that the final product is safe to be used in stated applications.
2. There will be 2 stages of competition. The first stage is the preliminary screening stage, where proposals will be submitted to select 5 best groups from each organization, to enter the final competition. 3 members per group.
3. All participants must be enrolled under a supervisor within the organizing team. Please contact your supervisor of choice based on your geographical and background preferences.

Supervisor	Organization	E-mail
Dr. Yu Kok Hwa	Universiti Sains Malaysia	yukokhwa@usm.my
Assoc. Prof. Dr. Kourosh Behzadian	University of West London	kourosh.behzadian@uwl.ac.uk
Assoc. Prof. Dr. Poh Phaik Eong	Monash University	poh.phaik.eong@monash.edu
Dr. Alireza Moghayedi	University of Cape Town	alireza.moghayedi@uct.ac.za
Dr. Isaac I. Akinwumi	Covenant University	isaac.akinwumi@covenantuniversity.edu.ng
Joaquin Diazsolano	Tekmann S.A. de C.V.	jdiazsolano@gmail.com

4. For the submission of the entry proposal, please e-mail to <frontierchampion2022@gmail.com>.
5. Below is a list of IoT devices that are available to be used in project. The final selection of sensors by each group will be subjected to the budget allocation by each organization, and will be decided by the supervisors.

Arduino UNO WiFi Rev2.0 Dev Board+USB B Type Cable
 Adapter 12V 2A
 Analog Turbidity Sensor by DFRobot
 Thermocouple and MAX 6675 module
 LCD display and 12C module for character LCD
 TDS meter
 Breadboard
 Analog pH Sensor/Meter Kit by DFRobot
 Analog Electrical Conductivity Sensor by DFRobot

Flow Meter
 R385 DC12V Diaphragm Water Pump
 Analog Turbidity Sensor by DFRobot
 Solid State Relay 40A
 Rocker Switch
 Jumper wire
 Non-contact water level sensor by DFRobot
 DC12V Peristaltic Pump

6. Each participant successfully made it into the final stage will be awarded with a participating e-certificate by RAE.
7. For the final competition winners, prizes worth up to £750 will be presented to the Champion, 1st Runner Up and Second Runner Up.
8. For any inquiries regarding the competition, please do not hesitate to contact your own supervisor, or just directly email to <frontierchampion2022@gmail.com>. We will be more than happy to assist you in clearing your doubts.

