ReWired Hackathon

-by NUS IEEE Student Branch
and
NUS Bitscraps

IEEE Socials

Welcome Speech
By: Sabarees
Vice-President of IEEE NUS Student Branch

What is ReWired

Collaboration between NUS IEEE and NUS Bitscraps.

Theme: Sustainability

Aim: Repurpose broken electronics using Arduino and IoT chips to promote sustainability.

Participants: JC and Poly students (junior), University students (senior)

Date: 25th May to 1st June

Venue: NUS Campus

Sponsors

1)Micron

https://youtu.be/xGvun2_8Acs?si=UOIyf6bKWRrYoRD7

2) EspressIF

https://www.espressif.com/

About Espressif

By Mr. Kai Jie

Rewired Hackathon

Participants are tasked with creating an innovative and functional prototype using an Espressif board and at least one component salvaged from a broken electronic device

For seniors: Physical prototype

For juniors: Theoretical idea of the prototype/solution

Problem Statement

Background

Electronic waste is a growing problem worldwide, with tons of discarded electronics ending up in landfills each year. However, many of these devices contain components that can still be salvaged and repurposed creatively to reduce waste and promote sustainability. Espressif boards, known for their versatility and low-power capabilities, offer an excellent platform for building innovative prototypes and solutions.

Challenge

Your challenge is to repurpose a part from a broken electronic device and integrate it with IoT create a new, innovative prototype that serves a practical purpose.

Deliverables

Items we will give:

1) Any one of these items: remotes, keyboards, mouses
2) ESP32 board
3) Arduino UNO (Must return back after Workshop)
4) Equipments available in the lab

Deliverables

Junior Category

- 3 Minute Video Pitch
- Report
- Slide Deck For Pitching

Senior Category

- 3 minute Video Pitch
- Report
- Slide Deck For Pitching
- Compulsory Prototype
- 2 Minute video to Demonstrate their prototype.

Evaluation Criteria

- **Sustainability (30%):**
  - How does the idea or concept demonstrate adherence to sustainability principles? Did it repurpose at least one electronic item part that might have been otherwise discarded?
- **Innovation (20%):**
  - What novel principles, solutions, or ideas are involved with the project?
- **Aesthetics (10%):**
  - for both: How appealing and satisfactory is the proposed solution/idea? For seniors only: How attractive are the aesthetics or visual appearance of the product?
- **Functionality (20%):**
  - How viable is the prototype/idea demonstrated?
- **Presentation (20%):**
  - How much detail and information are given in the presentation? Is the layout and presentation understandable?

Timeline

Day 1 (On-site)
Commencement of Hackathon, Talks, Sustainability workshop, Brainstorming session

Day 2 (On-site)
Arduino and Iot Workshops
9 am to 4 pm

Day 3 - 4 (Optional On-site)
Teams to work on their projects in the lab
Anytime between 9am to 3pm

Day 5
Work on own time
Submission by 2359 30th May

Day 6
Judging to shortlist top 3 from each category

Day 7 - Only Finalists
Finalist teams pitching, Closing Ceremony and Prize Distribution
9.15am to 1.15pm

Lab Safety

- No eating of food and drinks are allowed in lab
- No slippers are allowed in the lab. Only covered shoes are allowed
- Ensure all electrical equipment and power are switched off.
- Familiarize yourself with the emergency procedures, including the location of emergency exits and first aid kits.
- If unsure about how to use equipment (eg. Soldering Machine) provided do not hesitate to ask the student helpers.
- Long hair should be tied back, and loose clothing or accessories should be secured to prevent accidents.
- Keep work areas clean and organized to prevent accidents.

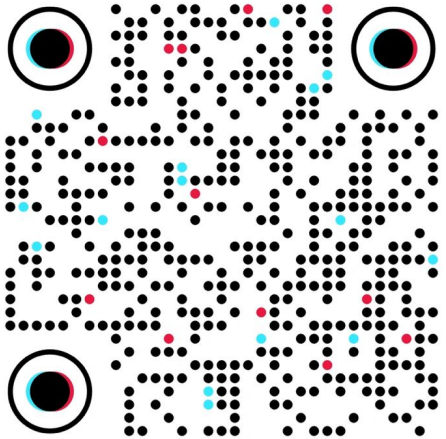
QnA Segment

ReWired Hackathon

Talk about sustainability
-by ALBA

Bitscraps Social Media

@NUSBITSCRAPS



@nusbitscraps

NUSbitscraps

Lunch Break

ReWired Hackathon

Sustainability Workshop
-by 1.5 Degrees NUS

ReWired Hackathon

Choosing of electronic items and
Brainstorming session

Thank You