Project Design Phase-I Ideation

Date	3 OCTOBER 2022	
Team ID	PNT2022TMID18501	1
Project Name	Virtual eye – lifeguard for swimming pools for active drowning	1
		<u>.</u>
Maximum Marks	2 Marks] =

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Step-1: Team Gathering, Collaboration and Select the Problem Statement

VIRTUAL EYE

Brainstorm & idea prioritization

In this session we aim to achieve a good base for beginning our project. With clear understanding of the task in hand, the next step would be to collectively put in our thoughts/ imagination and end with a proper feasibility

Ground Rules

- Be Creative
- . Rule out every possible ideas and improvements
- . Make your points clear and purposeful
- . Don't hesitate. (Every point is noteworthy) . Arguments are good ALA it lands beneficial
- . Have various perspectives towards the problem

Choose your best "How Might We" Questions

Share the top 5 brainstorm questions that you created and let the group determine where to begin by selecting one question to move forward with based on what seems to be the most promising for idea generation in the areas you are trying to impact.

(†) 10 minutes

QUESTION 1 How might we detect and differentiate active drowning with the least possible error rate?

QUESTION 2 How might we automate the alert systems so as to provide crutial stats and info to the rescue team ?

QUESTION 3 How might we optimize the results in the least time?

> How might we bring more privacy, yet use camera for

How might we optimally use minimal hardware to get the around the environment?

Brainstorm solo

Have each participant begin in the "solo brainstorm space" by silently brainstorming ideas and placing them into the template. This "silent-storming" avoids group-think and creates an inclusive environment for introverts and extroverts alike. Set a time limit. Encourage people to go for quantity.

Sai Priyan J K

High level testing must be carried out before rea world deployment.	Proper hyperparameters al must be foun the model	Systematic and Efficient d for algorithms t be followed	to
Requires HD cameras for good quality frames to be processed	Underwater cameras a possible solution to detect humans under deep water	24/7 Power supply is must for the system to run & report	
Provide critical and proper message to the rescue team	Make sure the stakeholders know, how the system works.	Make sure stakeholders understand that there is a possibility for a false alarm as well	the

Raja Vignesh Pherumal

he Al should	There should	More cameras
e trained	be manual alert	should be
ith more	system in case	used to
amples for	of detection	improve
etter results	failure	accuracy.
low will be ne accuracy evel in the system?	system detect properly if the pool is clumsy?	System should detect multiple drowning and should report the same
For privacy ourpose the ideo stream should not	The system shouldnt annoy others	cameras can be mounted on the bottom of floating boards for large
he stored	Others	swimming pools.

Ch -: - - - - - -

Pavinesh

BW to get th

have better information

Shai dhashan				
power backup should be here in case of powercut. happens if animals were encountered in the pool?	The network connectivity should be good for faster alert trasmission. Wieve mornigerselve will be a problem to detect all so multiple cappening and problems.	cameras should be maintained properly for good results Use powerful algorithm to gettrained from various datasets.		
Al should be trained in such a way that it should detect multiple				

Brainstorm as a group

Have everyone move their ideas into the "group sharing space" within the template and have the team silently read through them. As a team, sort and group them by thematic topics or similarities. Discuss and answer any questions that arise. Encourage "Yes, and..." and build on the ideas of other people along

① 15 minutes

suggestive ways ensure the

this deals with crit

life saving situation

making sure to always have back

supply

the rescue team of information reaches

passive possibilities one or more ways a

newbies and teaching age groups and also

as a probable

feed is not being recorded or saved instead being used

only for detection which is later

Privacy having an integration feed is not being recorded or saved e betterinformati and predict instead being used indicators given to children and newbies and teaching them signals to make the drowning detection easy only for detection video stream possabilities of a drowning incident which is later should not discarded be stored. When more people are drowning there will be a problem to detect all so multiple cameras areneeded to eliminate such **User Perspective** The system Cameras & Hardwares now the system works and should not Cameras should be annoy the bottom of floating boards fordetecting system work. swimmers should be drowning effectively especially on large maintained Make sure the properly for swimming pools. stakeholders understand that good results **Network and Connectivity** there is a possibli for a false alarm a System should detect multiple well connectivity should be good drowning and should repor for faster alert the same trasmission. 24/7 Power supply and power backup must for the system

source of energy

You can use the Voting session tool above to focus on the strongest ideas.

Will the

system detect

properly if the

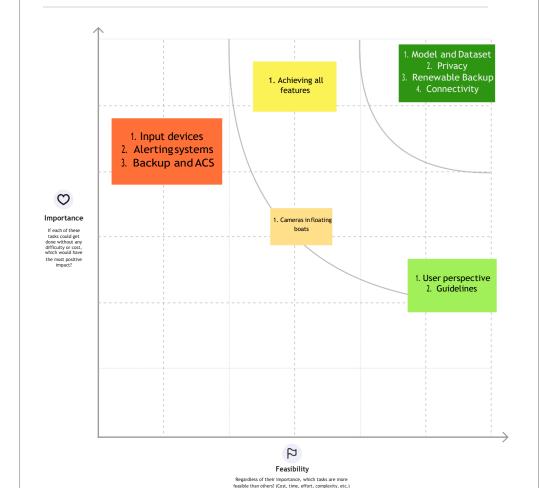
lassifiable video o

nderwater footag

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

① 20 minutes



Decide your focus

Give each person two icons to vote which idea should your team focus on & assign the duties & responsibilities

Kishore Kumar Barani Backend and MLA Backend and Intergration

Babhu Ganesh Karthika Frontend and

Design

and Utils

Whats Next...

- 1. Plan and code an effecient model and train it with the correct hyperparameters to produce a probable and accurate result.
- 2. Enhance the system to work in a proper environment in an integrated manner to yield a cohesive solution.
- 3. Create a proper frontend dash to give critial information with atmost clarity and least delay.
- 4. Comeup with the solution that is minimal, portable less intrusive and cost effective.



Team

Sai priyan J K Pavinesh

Raja Vigneshpheru mal

Shai Dharshan

















to run & report

proper alerts to

rescue team. power backup

should be

there in case

of powercut.





Al and ML

as a probable

trained in such

a way that it

should detect

multiple drowning

High level

testing must be

carried out

before real

world

deployment.

hyperparameters

the model

The Al should

be trained

with more

samples for

better results











