

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	24 September 2022
Team ID	PNT2022TMID02240
Project Name	Virtual Eye – Life Guard for Swimming Pools to Detect Active Drowning
Maximum Mark	4 marks

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

Template

Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

⌚ 10 minutes to prepare
 🕒 1 hour to collaborate
 👥 2-8 people recommended

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➔

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

⌚ 10 minutes

A

Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B

Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

C

Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) ➔

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⌚ 5 minutes

Swimming is one of the best exercises that helps people to reduce stress in this urban lifestyle. Swimming pools are found larger in number in hotels, and weekend tourist spots and barely people have them in their house backyard. Beginners, especially, often feel it difficult to breathe underwater which causes breathing trouble which in turn causes a drowning accident. Worldwide, drowning produces a higher rate of mortality without causing injury to children. Children under six of their age are found to be suffering the highest drowning mortality rates worldwide. Such kinds of deaths account for the third cause of unplanned death globally, with about 1.2 million cases yearly. To overcome this conflict, a meticulous system is to be implemented along the swimming pools to save human life.

🧠

Key rules of brainstorming

To run a smooth and productive session

➡️

Stay in topic.

💡

Encourage wild ideas.

➡️

Defer judgment.

👂

Listen to others.

🗣️

Go for volume.

👁️

If possible, be visual.

Step 2 : Brainstorm ideas

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

TIP



You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

ROHIT M

Active contours are used in an automatic video-based drowning detection system.

Using location monitoring to identify drowning victims

Detecting drowning victims with underwater cameras

Drone-based drowning detection utilising the COROLA and CNN algorithms

SAATHVIK KRISHNAN

Rescue people by detecting turbulence under water

Bluetooth based wristband to detect human pulses and alerts lifeguard

An infrared light sensor is placed in a no swim zone to give an alert

AI camera to monitor any unusual activity which alerts in an emergency

SHRIJEETH S

An alert is sent as SMS to the life guard phone when drowning happens.

Using yolo object detection, the system can determine if a person is drowning or swimming.

Using CNN and RNN to Classify Drowning Persons from Live Video

Swimming pose estimation using keypoints in the human body

SIDHARTH RAJ M

Hardware gadgets for detecting swimmer position

Drone based human activity recognition

Drowning detection system using Sentag innovative wearable safety technology

Low cost drowning detection system using Ultrasonic Sensors (Sonar)

Step 3: Idea listing and grouping

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

Cloud Computing Technology

An alert is sent as SMS to the life guard phone when drowning happens.

Using location monitoring to identify drowning victims

Bluetooth based wristband to detect human pulses and alerts lifeguard

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Internet of Things (IOT)

Drone based human activity recognition

Low cost drowning detection system using Ultrasonic Sensors (Sonar)

Hardware gadgets for detecting swimmer position

An infrared light sensor is placed in a no swim zone to give an alert

Rescue people by detecting turbulence under water

Machine Learning and Artificial Intelligence

AI camera to monitor any unusual activity which alerts in an emergency

Using yolo object detection; the system can determine if a person is drowning or swimming.

Using CNN and RNN to Classify Drowning Persons from Live Video

Drone-based drowning detection utilising the COROLA and CNN algorithms

Swimming pose estimation using keypoints in the human body

Step 4: Idea Prioritization

4

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.

🕒 20 minutes



