|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **1**  **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** | **2**  **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.  **10 minutes**    S.ABDUL BASITH R.AYUB KHAN  High level optimized feed able to process setup an ACS and  testing must be Proper Systematic transfer to ac hieve absolute drowning suggestive ways to  carried out hyperparameters and Efficient live realay will less and also alrerting ensure the  before real must be found for algorithms to BW to get the the rescue team of information reaches in  passive possibilities one or more ways as  world the model be followed classifiable video of as a probable this deals wi th critical  deployment. underwater footage instance life saving situation  Requires HD Underwater 24/7 Power ensuring ways where ensuring the video using alternative  cameras for cameras a supply is gau there is a 100% g a feed is not being source of energy  rentee of spottin recorded or saved such as solar to make  good quality possible solution must for the drowning situations and instead being used a green system but  placing multiple cameras  frames to be to detect humans system to run strategically to achive only for detection making sure to  processed under deep water & report results in unpredictable which is later always have backup  situations discarded supply  Make sure the having an i ntegration having retro reflec tive having considered  Provide critical Make sure the stakeholders co with fitness band al indicators given to the metrics and  mpani es to g et vi t  and proper stakeholders understand that stats of a swi mm er to childeren and variance of different  newbies and teaching age groups and also  message to the know, how the there is a possiblity have better information them signals to make different swimming  and predic t  rescue team system works. for a false alarm as the drowning environments both  possabili ties of a  well detection easy controlled and liesure  drowni ng i ncident  N.FARDEEN HUSSAIN **S.ABDUL THOUFEEQ**  **The AI should There should More cameras power backup The network cameras be trained be manual alert should be should be connectivity should be with more system in case used to there in case should be good maintained samples for of detection improve of powercut. for faster alert properly for better results failure accuracy. trasmission. good results**  **How will be sy Will the t System should What Warheednromwonriengpethopelre Use powerful**  **the accuracy stem detec detect multiple happens if will be a problem to algorithm to**  **level in the properly if the drowning and animals were detect all so multiple get trained**  **system? pool is should report encountered catmo erliams inaartee snuecehded from various**  **clumsy? the same in the pool? datasets.**  **problems.**  **For privacy The system cameras can be AI should be**  **purpose the shouldnt mounted on the trained in such**  **video stream annoy fl bottom of ds a way that it**  **oating boar should detect**  **should not others for large multiple**  **be stored. swimming pools. drowning** | **3**  **Brainstorm as a group TIP**  Have everyone move their ideas into the "group sharing space" within the You can use the **Voting**  **session** tool above to focus  template and have the team silently read through them. As a team, sort and on the strongest ideas.  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 the way.  **15 minutes**    **Privacy Features**  having an integ rati on  ensuring the video with fitness band  feed is not being **For privacy** compani es to g et vi tal  recorded or saved stats of a swimmer to  instead being used **purpose the** having retro reflecti ve have better information  only for detection **video stream** indicators given to and predic t  which is later children and newbies possabili ties of a  discarded **should not** and teaching them drowni ng inci dent **Will the**  **be stored.** signals to make the **system detect**  drowning detection **properly if the**  easy **When more people**  **are drowning there pool is**  **will be a problem to clumsy?**  **detect all so multiple cameras are needed**  **User Perspective to eliminate such**  **problems.**  Make sure the stakeholders know,  **The system Cameras & Hardwares**  how the system  works and **should not** Cameras should be  understand the mounted on  possibility for **annoy the** Underwater and  system work. **swimmers cameras** bottom of floating **should be** boards for detecting **maintained** drowning effectively  Make sure the especially on large  stakeholders **properly for** swimming pools.  understand that **good results Network and Connectivity**  there is a possiblity **System should**  for a false alarm as optim ized feed  well **detect multiple The network**  **drowning and connectivity** transfer to achieve live realay will less  **should report should be good** BW to get the  **the same for faster alert** classifiable v ideo of  **trasmission.** underwater footage  **Power**  24/7 Power supply and power backup  must for the system using alternative  to run & report source of energy  proper alerts to such as solar to make  a green system but  rescue team. **AI and ML**  making sure to  always have backup  supply able to process  **power backup** Proper absolute drowning and also alrerting  **should be** hyperparameters  must be found for the rescue team of  **there in case** the model passive possibilities as a probable  **of powercut.** instance  High level  **The AI should AI should be** testing must be **be trained trained in such** carried out **with more a way that it** before real **samples for should detect** world  **better results multiple** deployment.  **drowning** | **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** |  | **5**  **Decide your focus**  Give each person two icons to vote which idea should your team focus on & assign the duties & responsibilities  **5 minutes**    **s.Abdulbasith r.Ayubkhan**  Backend and Backend and MLA Intergration  **N.fardeenhussain S.Abdulthoufeeq**  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. |
| **VIRTUAL EYE** |  |  | 1. Model and Dataset 2. Privacy |
|  | **QUE STION 1**  **How might we detect and differentiate active drowning with the least** | 1. Achieving all features | 1. Renewable Backup 2. Connectivity |
|  |
|  | **possible error rate?** |  |  |
| **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 | **QUESTION 2**  **How might we automate the alert systems so as to provide crutial stats and**  **info to the rescue team ?** | 1. Input devices 2. Alerting systems 3. Backup and ACS |  |
| study. |  |  |  |
|  | **QUE STION 3** | **Importance** 1. Cameras in floating |  |
| **Ground Rules** | **How might we optimize the detection algorithm to yield results in the least time?** | If each of these boats  tasks could get done without any difficulty or cost, which would have |  |
| Be Creative |  | the most positi ve  impact? |  |
| Rule out every possible ideas and  improvements  Make your points clear and purposeful | **QUESTION 4** |  | 1. User perspective 2. Guidelines |
| Don't hesitate. (Every point is noteworthy)  Arguments are good ALA it lands beneficial | **How might we bring more**  **privacy, yet use camera for detection?** |  |  |
| Have various perspectives towards the |  |  |  |
| problem |  |  |  |
|  | **QUESTION 5** |  |  |
|  | **How might we optimally use** |  |  |
|  | **minimal hardware to get the** |  |  |
|  | **most accurate information in an** |  |  |
|  | **around the environment?** |  |  |
|  |  |  |  |
|  |  | **Feasibility** |  |
|  |  | Regardless of their importance, which tasks are more |  |
|  |  | feasible than others? (Cost, time, effort, complexity, etc.) |  |
| **Team** |  |  | |  |
| S.ABDUL BASITH |  |
| R.AYUB KHAN |  |
| N.FARDEEN HUSSAIN |  |
| S.ABDUL THOUFEEQ |  |



