Project Initialization and Planning Phase

Date	07 November 2024
Team ID	Team-739994
Project Name	Virtual Eye - Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

In modern urban lifestyles, swimming serves as a popular exercise, offering numerous health benefits. However, beginners, particularly children, often face challenges like difficulty breathing underwater, leading to potential drowning incidents. Worldwide, drowning is a leading cause of accidental death, notably among children under six, accounting for approximately 1.2 million fatalities annually. To address this, a robust AI-based safety system is essential in swimming pools to alert lifeguards to potential drowning situations and prevent accidents. The Virtual Eye system aims to detect drowning in real-time using a single underwater camera.

I am	Pool managers, lifeguards, or private pool owners who want a reliable safety solution. They are concerned about pool safety.
I'm trying to	Ensure swimmer safety by actively monitoring pool activity to quickly detect signs of drowning and respond in time to prevent tragedies.
But	Human lifeguards can sometimes be distracted, miss subtle signs of drowning, or may not always be available, in crowded or large pools.
Because	Limited human attention span, high costs of hiring more lifeguards, and the difficulty in detecting drowning signs immediately.
Which makes me feel	Concerned, anxious, or stressed about the potential risk of drowning incidents, consistent monitoring solution to alleviate these fears.

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	As a private pool owner, I'm trying to keep my guests	Ensure everyone's safety,	I can't constantly watch the	It's difficult to monitor the pool	Nervous and uneasy, as I worry about

	safe, but I can't constantly monitor the pool, which makes me nervous about possible accidents.	especially in the pool area, by monitoring for any signs of distress or drowning.	pool, and I'm afraid I may miss critical signs if I'm not paying close attention.	constantly, especially while managing other hosting responsibilities.	potential accidents and the safety of my loved ones in the pool area.
PS-2	A pool manager at a public swimming facility responsible for ensuring the safety of swimmers, including children and inexperienced swimmers.	Keep all swimmers safe by detecting any signs of active drowning as soon as possible to prevent incidents.	Lifeguards sometimes miss signs of drowning due to distractions or large crowds, which increases the risk of delayed response.	Human attention can be limited, and it's challenging to monitor all swimmers continuously, especially during peak hours.	Anxious and worried about the safety of swimmers, and concerned that I might not be able to prevent every potential drowning incident.