# Project Initialization and Planning Phase

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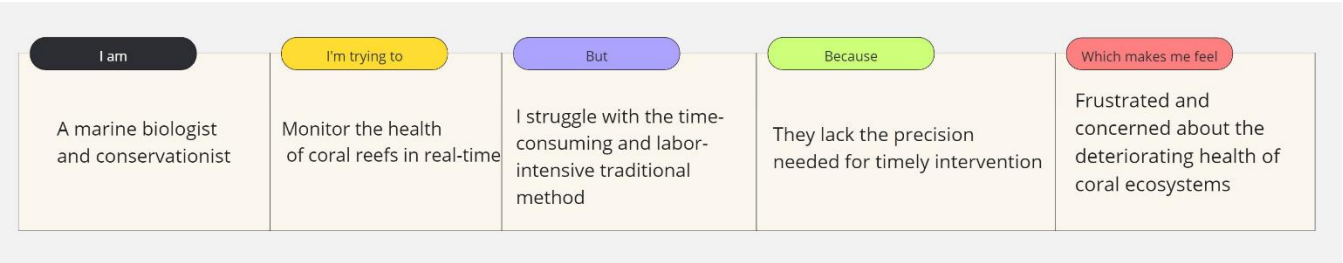
| Date | 19 July 2024 |
| Team ID | SWTID1720110092 |
| Project Name | Beneath the Waves: Unraveling Coral Mysteries Through Deep Learning |
| Maximum Marks | 3 Marks |

**Define Problem Statements: Beneath The Waves: Unraveling Coral Mysteries Through Deep Learning:**

The project "Beneath the Waves" addresses the challenges faced in coral reef monitoring and conservation by leveraging deep learning techniques to provide real-time, accurate, and comprehensive data. Coral reefs are crucial for marine biodiversity but are under threat from climate change, pollution, and human activities. Traditional methods for monitoring reef health, assessing biodiversity, and evaluating environmental impacts are labor-intensive and lack precision. By using advanced algorithms and neural networks, Beneath the Waves aims to identify signs of coral bleaching, disease, and other stressors, automate the identification and classification of marine species, and analyze the impact of human activities. This approach enables researchers and conservationists to take timely actions, develop effective conservation strategies, and foster a deeper understanding of coral ecosystems, ultimately contributing to their preservation and sustainability.




| Problem Statement (PS) | I am (Customer) | I'm trying to | But | Because | Which makes me feel |
|---|---|---|---|---|---|
| PS-1 | A marine biologist and conservationist | Monitor the health of coral reefs in real-time | I struggle with the time-consuming and labor-intensive traditional methods | They lack the precision needed for timely intervention | Frustrated and concerned about the deteriorating health of coral ecosystems |