

Project Design Phase-I
Proposed Solution Template

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| Date | 19 September 2022 |
| Team ID | PNT2022TMID592078 |
| Project Name | Project – Predicting Lumpy Skin Disease |
| Maximum Marks | 2 Marks |

| S.No. | Parameter | Description |
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| 1. | Problem Statement (Problem to be solved) | Lumpy Skin Disease (LSD) is a viral disease affecting cattle that is transmitted through blood feeding insects. The outbreak of the disease is associated with dramatical decrease in milk production which results food shortages. The occurrence of the disease has major impact on cattle farmers who rely on cattle for their livelihood and on biodiversity by disrupting the food chain. |
| 2. | Idea / Solution description | Early detection of the disease can reduce its outbreak. It can be possible by a well trained machine learning model which predicts the disease at an early stage by considering several factors such as Temperature, Breed, Poor Hygiene practices etc. |
| 3. | Novelty / Uniqueness | Our project stands out in the early detection of Lumpy skin disease at an early stage before the manifestation of lumps on the bodies or cows or buffaloes. This capability of early detection significantly reduces the likelihood of disease outbreak. |
| 4. | Social Impact / Customer Satisfaction | Allows proactive and timely intervention to safeguard cattle health and mitigate economic losses for cattle farmers. |
| 5. | Business Model (Revenue Model) | The business model can be structured around a service-oriented approach: Subscription Services: Offer a subscription-based model for access to the automated LSD detection service, providing varying levels of usage based on the number of cattle or frequency of diagnostic analyses. Licensing to Veterinary Services: License the technology to veterinary clinics and diagnostic laboratories, enabling them to integrate the automated detection system into their services. |

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| 6. | Scalability of the Solution | <p>Cloud-Based Infrastructure: Host the solution on scalable cloud platforms to accommodate varying workloads and ensure seamless accessibility for users.</p> <p>Continuous Improvement: Implement a feedback loop for continuous model improvement based on new data, ensuring adaptability to evolving disease patterns.</p> <p>Global Applicability: Design the solution to be applicable to different geographic regions and adaptable to variations in cattle breeds and environmental conditions.</p> |
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