**Project Development Phase**

**Model Performance Test**

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| Date | 19 November 2023 |
| Team ID | **Team 592303** |
| Project Name | Project – Predicting lumpy skin disease |
| Maximum Marks | 4Marks |

**Model Performance Testing:**

Project team shall fill the following information in model performance testing template.

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| **S.No.** | **Parameter** | **Screenshot / Values** |
|  | Dashboard design | Dashboard Design:  - Overview: Develop an intuitive dashboard for lumpy disease classification with user-friendly design and interactive elements.  - Graph Illustration: Include graphs depicting disease prevalence over time, distribution across regions, and a comparative analysis of classification accuracy.  Number of Visualizations/Graphs:  - Plan: Integrate a balanced set of visualizations, aiming for 4 key graphs:  1. Temporal Trend: Line chart showing lumpy disease cases over time.  2. Geospatial Distribution: Map illustrating disease prevalence in different regions.  3. Accuracy Metrics: Bar chart comparing classification accuracy metrics.  4. Class Distribution: Pie chart displaying the proportion of different disease classes. |
|  | Data Responsiveness | Data Responsiveness for Lumpy Disease Data Classification:  - Objective: Ensure the system promptly adapts to evolving data needs and challenges in lumpy disease classification.  - Strategy: Implement agile data processing pipelines, enabling real-time updates for new data, and optimizing the model for continuous learning.  - Metrics: Monitor responsiveness through data ingestion rates, model retraining frequency, and adaptability to emerging lumpy disease patterns. |
| 3. | Amount Data to Rendered (DB2 Metrics) | Data Retrieval Metric (DB2):  - Definition: Quantifies the amount of data extracted from the DB2 database for lumpy disease data classification.  - Purpose: Measures the efficiency of data retrieval processes, influencing the classification model's accuracy and responsiveness.  - Considerations: Optimize queries and indexing strategies to minimize data retrieval time and resource utilization. |
| 4. | Utilization of Data Filters | **Utilization of Data Filters implementation:** Apply filters based on criteria such as geographic location, time periods, or specific disease characteristics to focus the model on relevant data.   * **Benefits:**   + **Noise Reduction:** Filters eliminate irrelevant or noisy data, improving the signal-to-noise ratio in the classification process.   + **Customization:** Tailor the model to specific scenarios or conditions by adjusting filters, allowing for more nuanced and accurate classifications.   + **Efficiency:** Improve computational efficiency by working with refined datasets, reducing processing times for model training and inference.   Example Filters:   1. **Geographic Filter:** Focus on data from specific regions where lumpy diseases are prevalent. |
| 5. | Effective User Story | **User Story:** As a researcher in lumpy disease data classification, I want to enhance the system's capability by adding a variable number of scenes to better capture diverse environmental conditions and aid in the accurate identification of disease patterns.   * **Rationale:** By allowing the dynamic addition of scenes, the classification model can adapt to various geographical and environmental contexts, improving its robustness and accuracy in detecting lumpy diseases. * **Implementation:**   + **User Input:** Provide a user-friendly interface for researchers to add or modify scenes.   + **Integration:** Ensure seamless integration of new scenes into the data preprocessing and model training pipelines.   + **Scalability:** Design the system to handle varying numbers of scenes, accommodating future expansion and adaptation to diverse datasets. |
| 6. | Descriptive Reports | No of Visulizations / Graphs - 18 |