

## Project Development Phase Model Performance Test

Date	25 March 2025
Team ID	PNT2025TMID06908
Project Name	Predicting Plant Growth Stages with Environmental and Management Data Using Power BI.
Maximum Marks	

### Model Performance Testing:

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

S.No.	Parameter	Screenshot / Values
1.	Data Rendered	14 column and 193 Rows.
2.	Data Preprocessing	
3.	Utilization of Data Filters	We had shorted the data by giving the data type text, whole no. and the decimal no.
4.	DAX Queries Used	<p>Water_Frequency_Numeric =  SWITCH(  [Water_Frequency],  "daily", 1,  "bi-weekly", 2,  "weekly", 3,  BLANK())</p> <p>Temperature_Range =  SWITCH(  </p>

		<pre> TRUE(), [Temperature] &lt; 15, "Low", [Temperature] &gt;= 15 &amp;&amp; [Temperature] &lt; 25, "Moderate", [Temperature] &gt;= 25, "High" )  Humidity_Range = SWITCH( TRUE(), [Humidity] &lt; 40, "Low", [Humidity] &gt;= 40 &amp;&amp; [Humidity] &lt; 60, "Moderate", [Humidity] &gt;= 60, "High" )  Humidity_Level_Description = SWITCH( TRUE(), [Humidity] &lt; 30, "Very Dry", [Humidity] &gt;= 30 &amp;&amp; [Humidity] &lt; 50, "Dry", [Humidity] &gt;= 50 &amp;&amp; [Humidity] &lt; 70, "Moderate", [Humidity] &gt;= 70 &amp;&amp; [Humidity] &lt; 90, "Humid", [Humidity] &gt;= 90, "Very Humid" )  Temperature_Range_Description = SWITCH( TRUE(), [Temperature] &lt; 10, "Very Cold", [Temperature] &gt;= 10 &amp;&amp; [Temperature] &lt; 20, "Cold", [Temperature] &gt;= 20 &amp;&amp; [Temperature] &lt; 30, "Moderate", [Temperature] &gt;= 30 &amp;&amp; [Temperature] &lt; 40, "Warm", [Temperature] &gt;= 40, "Hot")  Growth_Milestone_Description = SWITCH( [Growth_Milestone], 0, "Early Stage", 1, "Mature Stage", "Unknown Stage" )  Plant_Growth_Category = SWITCH( </pre>
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		<div>[Growth_Milestone], 0, "Initial Growth", 1, "Advanced Growth", "Uncategorized" )</div>																																																								
5.	Dashboard design	<div><div>Plant Growth Milestones : Factors And Insights</div><div><div><div>Water Frequency According to Soil Type</div><table><thead><tr><th>Soil_Type</th><th>High</th><th>Moderate</th><th>Total</th></tr></thead><tbody><tr><td>loam</td><td>891.61</td><td>205.65</td><td>317.25</td></tr><tr><td>loam (0.00%)</td><td>0.00</td><td>0.00</td><td>16.38</td></tr><tr><td>daily</td><td>64.02</td><td>54.73</td><td>118.75</td></tr><tr><td>dry (0.00%)</td><td>0.00</td><td>0.00</td><td>182.19</td></tr><tr><td>sandy</td><td>215.43</td><td>717.46</td><td>432.88</td></tr><tr><td>loam (0.00%)</td><td>0.00</td><td>0.00</td><td>83.78</td></tr><tr><td>weekly</td><td>25.27</td><td>70.65</td><td>105.92</td></tr><tr><td>daily</td><td>125.80</td><td>86.23</td><td>233.39</td></tr><tr><td>clay</td><td>288.24</td><td>297.13</td><td>487.37</td></tr><tr><td>loam (0.00%)</td><td>0.00</td><td>0.00</td><td>127.95</td></tr><tr><td>daily</td><td>95.42</td><td>40.66</td><td>136.09</td></tr><tr><td>loam (0.00%)</td><td>0.00</td><td>0.00</td><td>243.84</td></tr><tr><td>Total</td><td>487.28</td><td>630.24</td><td>1,317.51</td></tr></tbody></table></div><div><div>Average_Temperature and Sum of Temperature by Temperature_Range_Description</div><div><div>● Increase ● Decrease ● Total</div></div><div><div>Temperature And Its Description According To Its Plant Growth</div><div><div>Key influencers: Top segments</div><div>When is Temperature more likely to be: Low</div><div>We found 1 segments and ranked them by Ave...</div><div>Segment 1: 20.24</div></div></div></div><div><div>Sum of Growth_Milestone by Fertilizer_Type</div></div><div><div>Average_Humidity by Humidity_Level_Description</div></div><div><div>Growth_Milestone_Count According To Its Soil Type</div></div></div></div>	Soil_Type	High	Moderate	Total	loam	891.61	205.65	317.25	loam (0.00%)	0.00	0.00	16.38	daily	64.02	54.73	118.75	dry (0.00%)	0.00	0.00	182.19	sandy	215.43	717.46	432.88	loam (0.00%)	0.00	0.00	83.78	weekly	25.27	70.65	105.92	daily	125.80	86.23	233.39	clay	288.24	297.13	487.37	loam (0.00%)	0.00	0.00	127.95	daily	95.42	40.66	136.09	loam (0.00%)	0.00	0.00	243.84	Total	487.28	630.24	1,317.51
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6	Report Design	<div><div><div><div>6.83</div><div>Average_Sunlight_Hours</div><div><div>Average_Sunlight_Hours by Soil_Type</div></div></div></div><div><div>58.10</div><div>Average_Humidity</div><div><div>At 74.02, Humid had the highest Average Humidity and was 79.53 % higher than Dry, which had lowest Average Humidity at 41.23.</div><div>Humid had the highest Average Humidity at 74.02, followed by Moderate at 60.10 and Dry at 41.23.</div><div>Moderate had 60.10 23 Average Humidity Dry had 41.23 and Humid had 74.02.</div><div>Temperature_Range_Description contributed the most to the Decrease of temperature, when Temperature_range_description was cold temperature decreased by 9.70%</div><div>clay had Highest Average of sunlight_hours at 7.27, followed by sandy at 6.76 and loam at 6.41</div><div>At 54, Moderate had the highest Growth_Milestone_Count and was 260.00% higher than Humid, Which had the lowest Growth_Milestone_Count at 15.</div><div>Moderate had 54 Growth_Milestone_Count Dry</div></div></div></div> <div><div>25.08</div><div>Average_Temperature</div><div><div>Growth_Milestone_Count by Humidity_Level_Description</div></div><div><div>Growth_Milestone_Count</div></div></div>																																																								