A Evaluation Metric for Human Evaluation

Table 1: Evaluation Metric for AWS Diagnosis Quality

Criteria	**Score**
Correctly identified actual sensor/equipment fault	5
Identified very similar or closely related fault	4
Identified related issue that could contribute	3
Identified tangentially related but unlikely cause	2
Missed actual fault or identified unrelated issue	0

Table 2: Evaluation Metric for Troubleshooting Actions

Criteria	**Score**
Strongly agree actions would resolve issue	5
Agree actions would likely resolve issue	4
Neutral – actions may or may not help	3
Disagree actions would resolve issue	2
Strongly disagree actions would help	1

B Feedback and Suggestions from Engineers

Table 3: Expert Suggestions and Feedback

Expert	**Suggestion/Feedback**
1	N/A
2	N/A
3	N/A
4	Add a data anomaly detection script (e.g., temperature values deviating by more than $\pm 5^{\circ}$C from the daily average) to help identify malfunctioning sensors.
5	Create a troubleshooting SOP for each type of issue: "No data received", "Sensor not detected", "Abnormal values", "Modem not connected". Establish a periodic maintenance schedule based on calendar intervals and sensor operating hours (e.g., every 3 months or every 1,000 operating hours).
6	Create a graph showing the downtime history and the monthly frequency of failures. Identify patterns, for example, failures occurring more often during the rainy season may indicate issues with the power system or grounding.