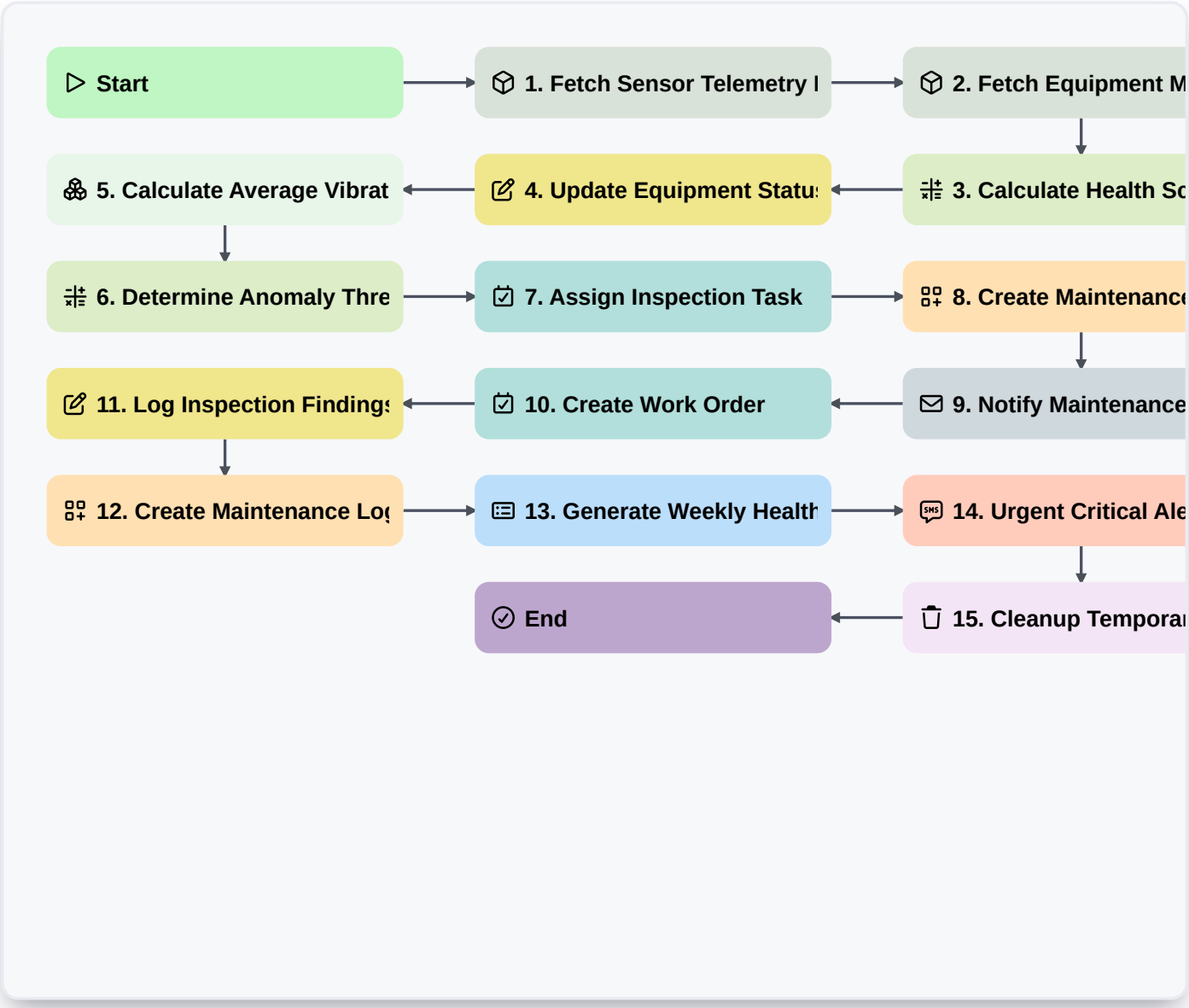
ChecklistGuro

Predictive Maintenance Monitoring Process



Start
Start of the Workflow/Process.

1. Fetch Sensor Telemetry Data
Retrieve the latest temperature, vibration, and pressure readings from the IoT sensor data model.

2. Fetch Equipment Metadata
Retrieve machine specifications, installation date, and threshold limits from the Equipment data model.

3. Calculate Health Score
Execute a formula to calculate a degradation score based on current sensor values vs. historical thresholds.

4. Update Equipment Status
Update the 'Current Condition' field in the Equipment data model based on the calculated health score.

5. Calculate Average Vibration Trend
Calculate the average vibration levels over the last 7 days to identify upward trends.

6. Determine Anomaly Threshold
Compare the current calculated health score against the predefined critical limit.

7. Assign Inspection Task
Create a task for the Maintenance Technician to perform a physical inspection of the flagged machine.

8. Create Maintenance Alert Entry
Create a new entry in the 'Alerts' data model documenting the anomaly detection.

9. Notify Maintenance Manager
Send an email alert to the Manager containing the machine ID and the detected anomaly details.

10. Create Work Order
Create a high-priority task in the Work Order data model for the repair crew.

11. Log Inspection Findings
Update the 'Last Inspection Result' field in the Equipment model once the technician completes the task.

12. Create Maintenance Log
Create a permanent record entry in the Maintenance History model for audit purposes.

13. Generate Weekly Health Report
Generate a summary report of all equipment health scores and completed maintenance tasks for the week.

14. Urgent Critical Alert SMS
Send an urgent SMS to the On-Call Engineer if the health score drops below the critical threshold.

15. Cleanup Temporary Telemetry
Delete temporary high-frequency sensor cache entries once they have been aggregated into the daily trend.

End
End of the Workflow/Process.