

## Ideation Phase

### Empathize & Discover

Date	31 January 2026
Team ID	LTVIP2026TMIDS38689
Project Name	Electric Motor Temperature Prediction using Machine Learning
Maximum Marks	4 Marks

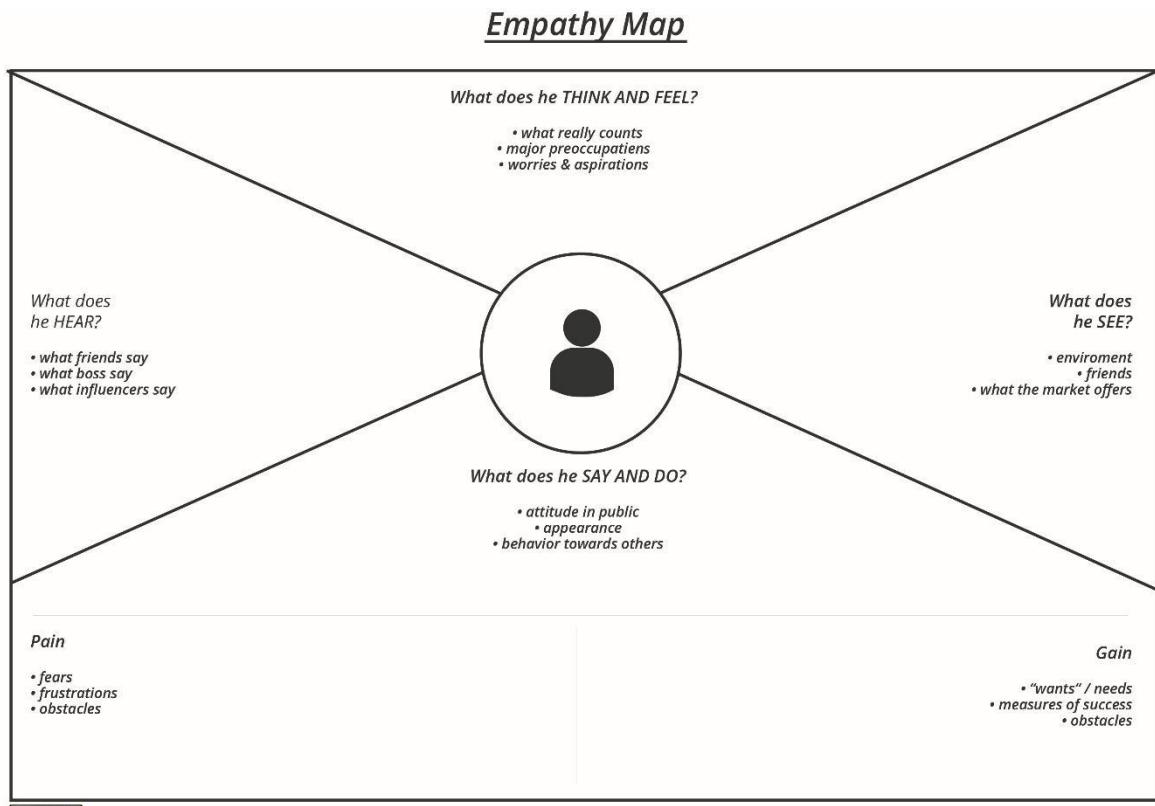
#### Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to help teams better understand their users.

Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

#### Example:



Category	Details according to Project
Who are we empathizing with?	An engineer responsible for the uptime and health of electric motors in a large manufacturing plant.
What do they need to DO?	They need to monitor motor vitals (voltage, current, coolant) and predict potential overheating before a "stator winding" or "permanent magnet" failure occurs.
What do they SEE?	They see fluctuations in sensor data on their dashboard, physical wear on equipment, and the high cost of replacement parts when a motor burns out.
What do they SAY?	"I wish I knew exactly when this motor was going to hit a critical temperature so I could schedule maintenance during the night shift".
What do they DO?	They manually check temperatures, use basic threshold alarms that only trigger <i>after</i> it's too hot, and spend hours analyzing raw sensor logs.
What do they HEAR?	They hear warnings from management about production downtime and technical advice from operators about strange motor noises or vibrations.
What do they THINK & FEEL?	<p><b>Pains:</b> They feel stressed about unexpected breakdowns and the manual effort required to track multiple motors.</p> <p><b>Gains:</b> They feel empowered when using predictive ML models that provide a specific "Motor Temp" forecast, allowing for proactive decisions.</p>