

Hi Nandhan,

Your goal of becoming a product manager at Tesla is inspiring, and the way you connected that with SHAP's use in understanding model behavior was very well thought out. Your example of using SHAP to interpret smart vehicle sensor data was interesting (Alomari & Andó, 2024). I agree that this insight can help improve how electric vehicles perform and how users experience them.

There is one area in which I am curious to hear more about how SHAP might help when evaluating battery performance and charging habits in electric cars. For example:

- Can SHAP help us understand how the age of a battery affects its range or performance?
- Could it show how much the battery has been used, like usage behavior or patterns
- Can SHAP identify how many charge cycles were done using fast charging, which may wear out the battery faster?

These details are essential for people thinking about buying a used Tesla. Do you think SHAP can help them make better choices by showing the real condition of the battery (Valdes, 2025)?

You did a great job explaining SHAP's strengths and limitations. Keep it up!

All The Best,

Avinash Bunga

### References

Alomari, Y., & Andó, M. (2024). SHAP-based insights for aerospace PHM: Temporal feature importance, dependencies, robustness, and interaction analysis. *Results in Engineering*, 21, 101834. <https://doi.org/10.1016/j.rineng.2024.101834>

Divya, G., Mustare, N. B., Swarupa, M. L., & Phani Kumar, K. S. V. (2025). Improving electric vehicle battery health management with explainable AI. *E3S Web of Conferences*, 616, 03030. <https://doi.org/10.1051/e3sconf/202561603030>

Valdes, R. (2025, January 17). *EV battery health: The essential guide*. Kelley Blue Book. Retrieved April 11, 2025, from <https://www.kbb.com/car-advice/ev-battery-health-essential-guide/>