

Hello Khieokham,

Great work on analyzing the relationship between car speed and stopping distance!

Feedback on Your Conclusion: You concluded that the relationship is linear, which generally makes sense based on the trend line in your graph. However, when looking closely at the data points, especially at higher speeds, some points seem to deviate from the straight line. This suggests that the relationship might be a bit more complex than just a steady increase (Physicsclassroom, n.d.).

Alternative Interpretation: Your scatter plot hints at a pattern where the stopping distance does not increase at a constant rate but becomes steeper at higher speeds. This could be due to factors like increased kinetic energy or braking efficiency decreasing as speeds rise, causing the stopping distance to grow faster than a simple straight line might suggest (Aceable, n.d.).

Suggested Curve: Considering a quadratic curve might capture the relationship better, especially for the higher speed ranges where stopping distances rise more dramatically. This type of curve would reflect the data more accurately, showing that stopping distance increases significantly as speed goes up (Stackoverflow, 2019).

Overall, your analysis is well done, and considering using a slightly different curve could provide a more complete picture of the data. Thanks for sharing your insights.

All the Best!

Avinash

References

Aceable (n.d.). *How Speed Affects Braking Distance*. Retrieved August 31, 2024, from

<https://www.aceable.com/safe-driving/how-speed-affects-braking-distance/>

Physicsclassroom (n.d.). *How Far Will It Skid?* Retrieved August 31, 2024, from

<https://www.physicsclassroom.com/mmedia/energy/cs.cfm>

Stackoverflow (2019, July). *How to plot a user defined quadratic equation as an overlay to a scatter plot? [duplicate]*.

<https://stackoverflow.com/questions/51564971/how-to-plot-a-user-defined-quadratic-equation-as-an-overlay-to-a-scatter-plot>