**Conclusion:**

In conclusion, the Triathlon Multiple Linear Regression worksheet has provided valuable insights into the predictors of run times in the Lake Placid 2022 Ironman Canadian Finishers dataset. Initially, both Swim Time and Bike Time demonstrated significance as individual predictors, supported by hypothesis tests and confidence intervals. The hypothesis test for the slope term of Bike Time yielded a p-value of 0, indicating its significance. Additionally, the 95% confidence interval for the slope term of Swim Time excluded 0, further affirming its significance.

However, when both Swim Times and Bike Times were included as predictors in the multiple linear regression model, we observed a change in significance. Swim Times were no longer a significant predictor. This finding suggests that when considering both predictors simultaneously, the predictive power of Swim Times in estimating run times diminishes. These findings emphasize the importance of evaluating multiple predictors in regression analysis and understanding how their inclusion can impact the significance and interpretation of individual predictors..

**Author Information:**

AJ Dykstra (St. Lawrence University), Ivan Ramler (St. Lawrence University),

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