Evaluation of Field Research Station Systems Reliability in South Africa: A Quasi-Experimental Approach

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Abstract

Field research stations in South Africa play a crucial role in advancing knowledge across various disciplines, including computer science. A quasi-experimental approach was employed, utilising statistical analyses such as regression models to assess system performance under varying conditions. Confidence intervals were used to measure the precision of reliability estimates. The regression model revealed a significant improvement in system reliability with an estimated $R^2 = 0.75$ (95% CI: [0.68, 0.81]) after implementing recommended modifications. This study successfully demonstrates the effectiveness of the quasi-experimental design in evaluating and enhancing field research station systems' reliability in South Africa. Based on findings, it is recommended that all future research stations adopt similar improvements to ensure consistent data quality and efficiency.

ABSTRACT-ONLY PUBLICATION

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