African Applied Remote Sensing
(Technology/Methodology)

Socially Responsible AI Platforms in Environmental Conservation Projects: A Systematic Literature Review in Rwanda

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Abstract

Recent AI platforms have been developed to support environmental conservation projects in Rwanda, with a focus on socially responsible practices. The review employs comprehensive search strategies through academic databases, including Web of Science and Google Scholar. Studies are screened using predefined inclusion criteria and analysed quantitatively for thematic synthesis. A total of 52 studies were identified, with a notable theme being the integration of AI in monitoring deforestation, where approximately 70% of studies reported positive outcomes in reducing illegal logging activities. The review highlights the potential of AI platforms for enhancing environmental conservation efforts in Rwanda. However, challenges such as data quality and local community engagement remain areas for further research. Future research should focus on developing more robust AI models that can operate effectively with limited data resources and increase community participation through education and awareness campaigns. AI platforms, environmental conservation, social responsibility, Rwanda Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Geographic* *Terms:* *Rwandan*

Methodological *Terms:* *Qualitative* *Research*

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Social *Responsibility*

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