Utilizing Sentinel 2 Imagery and Cadastral Data to Analyze Urban Growth, in Colombia

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SUMMARY

Introduction

The Instituto Geográfico Agustín Codazzi (IGAC) in Colombia is a leading organization that leverages technologies to promote development. This paper presents the combination of two projects focused on predicting growth and comparing Googles building predictions with cadastral information.

Objectives

1. To use images for predicting patterns of sprawl.

2. To assess the effectiveness and accuracy of Googles building predictions by comparing them with records.

Methods

1. Data Collection; Utilizing satellite images from Sentinel 2 cadastral information and Googles building predictions.

2. Big Data Processing; Employing cloud computing services to handle datasets.

3. Machine Learning; Implementing supervised learning algorithms to predict growth and evaluate the accuracy of Google building

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models.

Preliminary Results

Initial findings indicate a correlation between Sentinel 2 imagery and actual patterns of growth. Furthermore discrepancies between Googles predictions and cadastral records provide insights, for improving land management strategies.

Conclusion

These initiatives not showcase IGACs dedication to enhancing accuracy but also exemplify the synergistic possibilities that interdisciplinary research can achieve.

This project along, with the 22 projects under IGACs portfolio offers a plan, for utilizing spatial data to tackle intricate urban issues effectively.

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