CanoPy

[CanoPy GitHub repository](#)

CanoPy is the Python module for the Georgia Canopy Analysis 2009 project sponsored by the Georgia Forestry Commission (GFC). To learn how to use this module, please read the [user manual](#). For technical details, refer to the [technical manual](#).

Introduction

We developed this module to conduct the Georgia statewide canopy analysis study using the 2009 National Agriculture Imagery Program (NAIP) imagery data. To assess tree canopy, we needed four bands including red (R), green (G), blue (B), and near-infrared (NIR). The three-band RGB NAIP imagery data is available freely online at https://nrcs.app.box.com/v/naip. However, the four-band NAIP imagery is not available online and needs to be purchased from the United States Department of Agriculture (USDA). Since our study is statewide, there are a large number of NAIP quarter quad (QQ) imagery tiles—specifically, 3,913 GeoTIFF files across the entire Georgia—and it would not be feasible to manually pre-process these tiles before we feed them to a canopy classification algorithm. It is not only the number of input tiles, but also the number of output files that makes it challenging to complete this analysis efficiently. This module provides utility functions for pre-processing input tiles and post-processing output files to finally create the final seamless canopy raster for specified physiographic regions.

Project team

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    - Python development
- Jennifer McCollum, Undergraduate Student, IESA, UNG
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    - Literature review
    - Documentation
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TODOs

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software

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