

# CanoPy user manual

CanoPy is the Python module for the Georgia Canopy Analysis 2009 project sponsored by the Georgia Forestry Commission (GFC). For further information about this project, please refer to the [CanoPy](#) page.

This document explains how to use the [CanoPy](#) module. For technical details, please read the [technical manual](#).

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## Requirements

- ArcGIS Desktop 10.x
- ArcPy
- Python 2 standard module: os
- Feature Analyst™ by the Textron Systems
- Automated Feature Extraction (AFE) models trained using Feature Analyst

We are currently planning on developing a fully open source solution without using ArcGIS and Feature Analyst.

## How to use the CanoPy module

1. Clone the [CanoPy GitHub repository](#)

```
git clone https://github.com/HuidaeCho/canopy.git
```

2. Copy canopy\_config-example.py to canopy\_config.py
3. Edit canopy\_config.py to recognize your layers and folder structures
4. Start ArcMap
5. Add Physiographic\_Districts\_GA.shp. Its layer name is phyregs\_layer in canopy\_config.py
6. Add naip\_ga\_2009\_1m\_m4b.shp. Its layer name is naipqq\_layer in canopy\_config.py
7. Open the Python window from within ArcMap
8. Import the canopy module

```
import sys
sys.path.append('C:/path/to/the/canopy/module')
```

9. Import the canopy module

```
import canopy
```

10. Assign physiographic region IDs to the naipqq layer

```
canopy.assign_phyregs_to_naipqq()
```

11. Add physiographic region IDs to process to phyreg\_ids

```
phyreg_ids = [8, 7]
```

12. Reproject original NAIP QQ tiles to the target projection

```
canopy.reproject_input_tiles(phyreg_ids)
```

13. Run trained AFE models to classify canopy and non-canopy cells

14. Convert AFE output files to the final seamless canopy GeoTIFF file per physiographic region

```
canopy.convert_afe_to_canopy_tiff(phyreg_ids)
```

## TODOs

☐ [hcho]Upload sample data

[software](#)

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