



User Guide

INOV TAXON Software

Inovtaxon - identification of leaf images

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Run directory:

- cd src
- python main.py

Dependencies

- Python 2.7.6
- Opencv 2.7
- scikit-image
- TK Development
- python-weka-wrapper

For Ubuntu:

```
sudo apt install python-minimal
sudo apt-get install python-opencv
apt install python-pip
sudo pip install -U scikit-image
sudo apt-get install tk tk-dev
sudo apt-get install build-essential python-dev
sudo apt-get install python-pip python-numpy
sudo apt-get install default-jdk
pip install -U pip
```

error pip:

```
sudo python -m pip uninstall pip && sudo apt install python-pip --reinstall
```

```
sudo apt install python-numpy or pip install numpy
```

```
sudo apt-get install python-numpy python-scipy
```

```
python -m pip install -U matplotlib
```

```
python -m pip install --user numpy scipy matplotlib ipython jupyter pandas sympy nose
```

```
pip install ipython[all]
```

```
pip install networkx
```

```
sudo apt-get install libfreetype6
```

```
pip install Cyclr
```

```
sudo apt-get install python-pil python-matplotlib python-pygraphviz
```

```
sudo pip install javabridge==1.0.18
```

```
sudo pip install python-weka-wrapper
```

```
sudo apt-get install tk8.5
```

```
sudo apt install python-pil.imagetk
```

```
apt install linuxbrew-wrapper
```

Windows Explorer window showing the contents of the folder **annonaceae_annona_cassiflora** under the **M.phone** drive. The left sidebar shows the navigation pane with "Outros locais" selected. The main pane displays a list of folders, with **annonaceae_annona_cassiflora** selected.

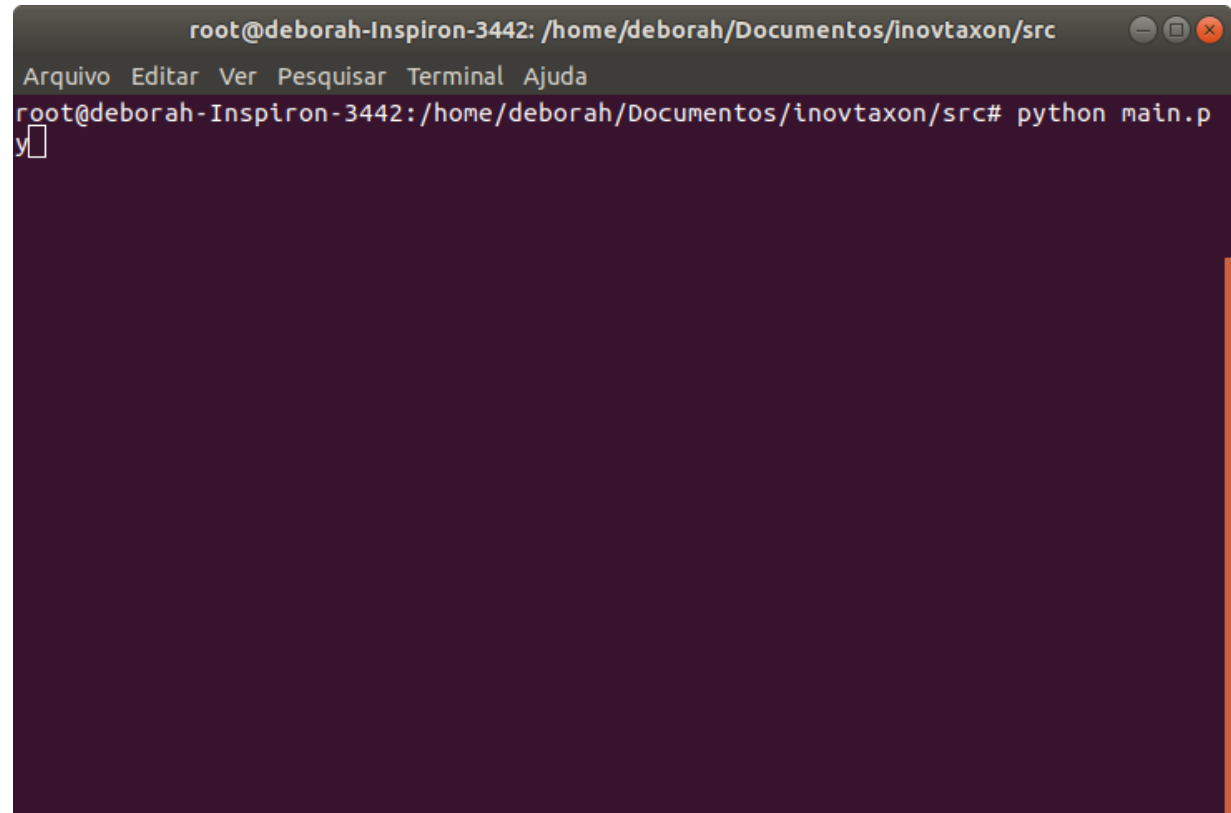
Nome	Tamanho	Modificado
annonaceae_annona_cassiflora	80 itens	1 de mai de 2016
annonaceae_annona_coriacea	80 itens	1 de mai de 2016
annonaceae_xylopia_aromatica	80 itens	1 de mai de 2016
bignoniaceae_tabebuia_aurea	80 itens	1 de mai de 2016
caryocaraceae_caryocar_brasiliense	80 itens	1 de mai de 2016
chrysobalanaceae_licania_humilis	80 itens	1 de mai de 2016
combretaceae_terminalia_argentea	80 itens	1 de mai de 2016
connaraceae_connarus_suberosus	80 itens	1 de mai de 2016
dilleniaceae_curatella_americana	80 itens	1 de mai de 2016
fabaceae_andira_cuyabensis	80 itens	1 de mai de 2016
fabaceae_bowdichia_virgilloides	80 itens	1 de mai de 2016
fabaceae_copaifera	80 itens	1 de mai de 2016
fabaceae_dimorphandra_mollis	80 itens	1 de mai de 2016
fabaceae_diptychandra_aurantiaca	80 itens	1 de mai de 2016
fabaceae_strobnodendron_obovatum	80 itens	1 de mai de 2016

"annonaceae_annona_cassiflora" selecionado (contendo 80 itens)

Windows Explorer window showing the contents of the folder **annonaceae_annona_cassiflora** under the **M.phone** drive. The left sidebar shows the navigation pane with "Outros locais" selected. The main pane displays a list of image files, with **WP_20160127_087.jpg** selected.

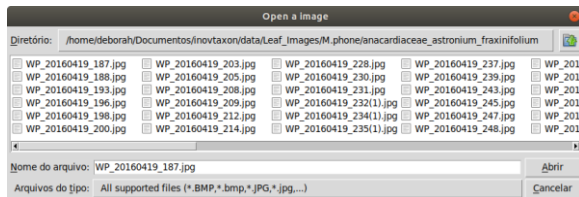
Nome	Tamanho	Modificado
WP_20160127_087.jpg	2,0 MB	27 de jan de 2016
WP_20160127_088.jpg	2,0 MB	27 de jan de 2016
WP_20160127_089.jpg	1,9 MB	27 de jan de 2016
WP_20160127_090.jpg	1,9 MB	27 de jan de 2016
WP_20160127_091.jpg	2,0 MB	27 de jan de 2016
WP_20160127_092.jpg	1,9 MB	27 de jan de 2016
WP_20160127_093.jpg	2,0 MB	27 de jan de 2016
WP_20160127_094.jpg	2,0 MB	27 de jan de 2016
WP_20160127_095.jpg	1,9 MB	27 de jan de 2016
WP_20160127_096.jpg	1,9 MB	27 de jan de 2016
WP_20160127_097.jpg	2,0 MB	27 de jan de 2016
WP_20160127_098.jpg	1,9 MB	27 de jan de 2016
WP_20160127_099.jpg	2,0 MB	27 de jan de 2016
WP_20160127_101.jpg	1,9 MB	27 de jan de 2016
WP_20160127_102.jpg	1,9 MB	27 de jan de 2016

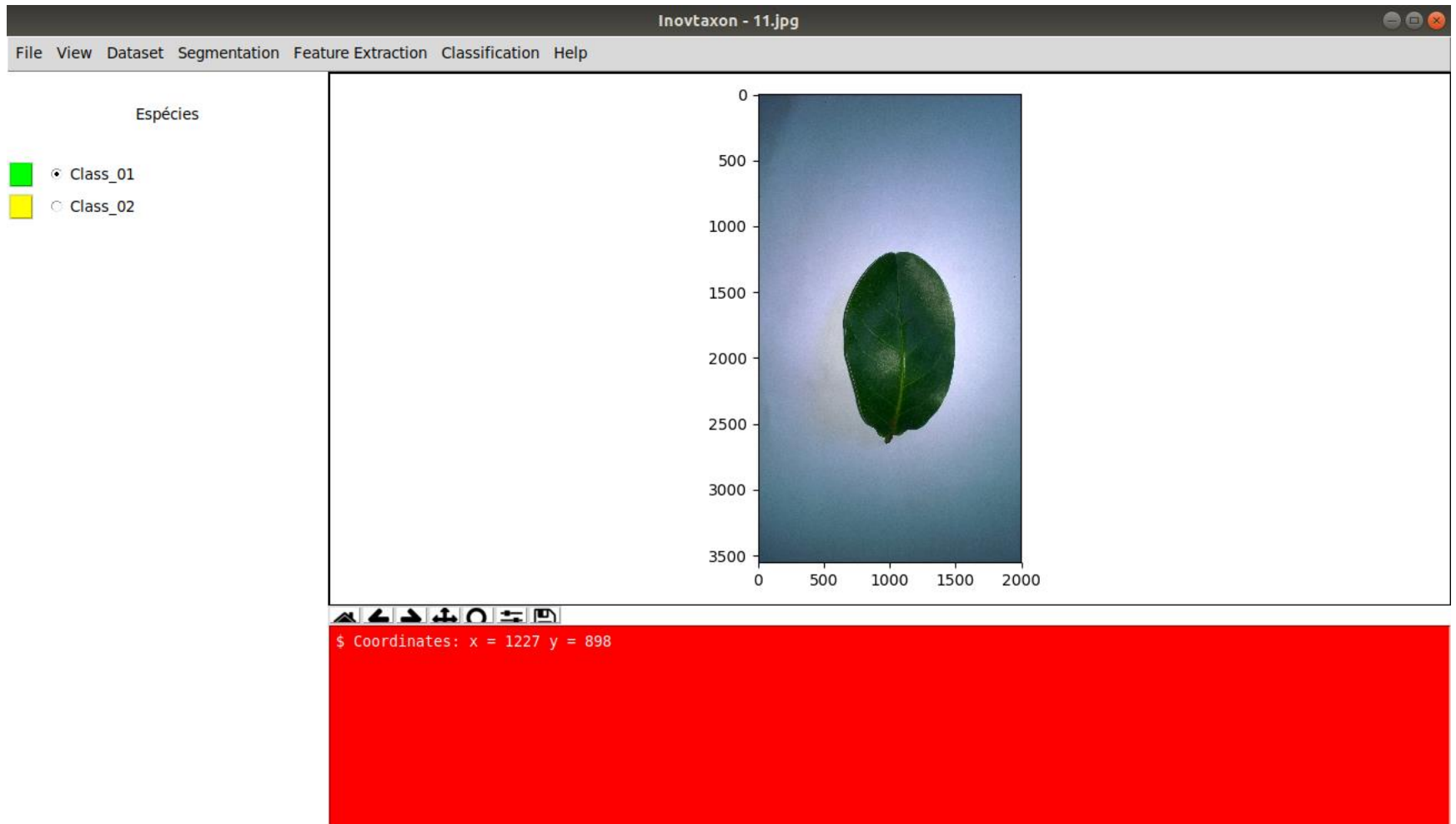
cd src
python main.py

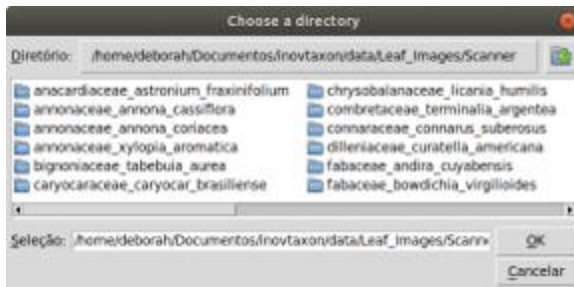
A terminal window with a dark purple background and a grey title bar. The title bar contains the text 'root@deborah-Inspiron-3442: /home/deborah/Documentos/inovtaxon/src' and standard window control buttons. Below the title bar is a menu bar with the options 'Arquivo', 'Editar', 'Ver', 'Pesquisar', 'Terminal', and 'Ajuda'. The main area of the terminal shows the command prompt 'root@deborah-Inspiron-3442: /home/deborah/Documentos/inovtaxon/src#' followed by the command 'python main.py' which has been entered and is followed by a cursor. There is a small orange vertical bar on the right side of the terminal window.

```
root@deborah-Inspiron-3442: /home/deborah/Documentos/inovtaxon/src
Arquivo  Editar  Ver  Pesquisar  Terminal  Ajuda
root@deborah-Inspiron-3442: /home/deborah/Documentos/inovtaxon/src# python main.py
```

Open image

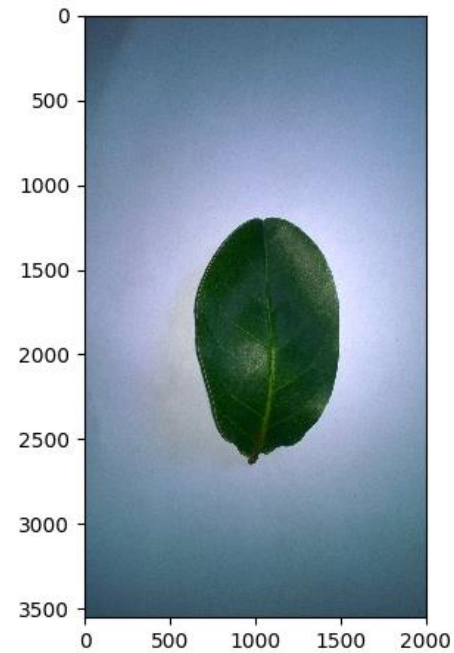






Espécies

- ☒ anacardiaceae_astronium_f
- ☐ annonaceae_annona_cassifl
- ☐ annonaceae_annona_coriace
- ☐ annonaceae_xylopiaromat
- ☐ bignoniaceae_tabebuiaaur



```
$ Image dataset defined: /home/deborah/Documentos/inovtaxon/data/teste
```

Configure and execute

Configuring Slic

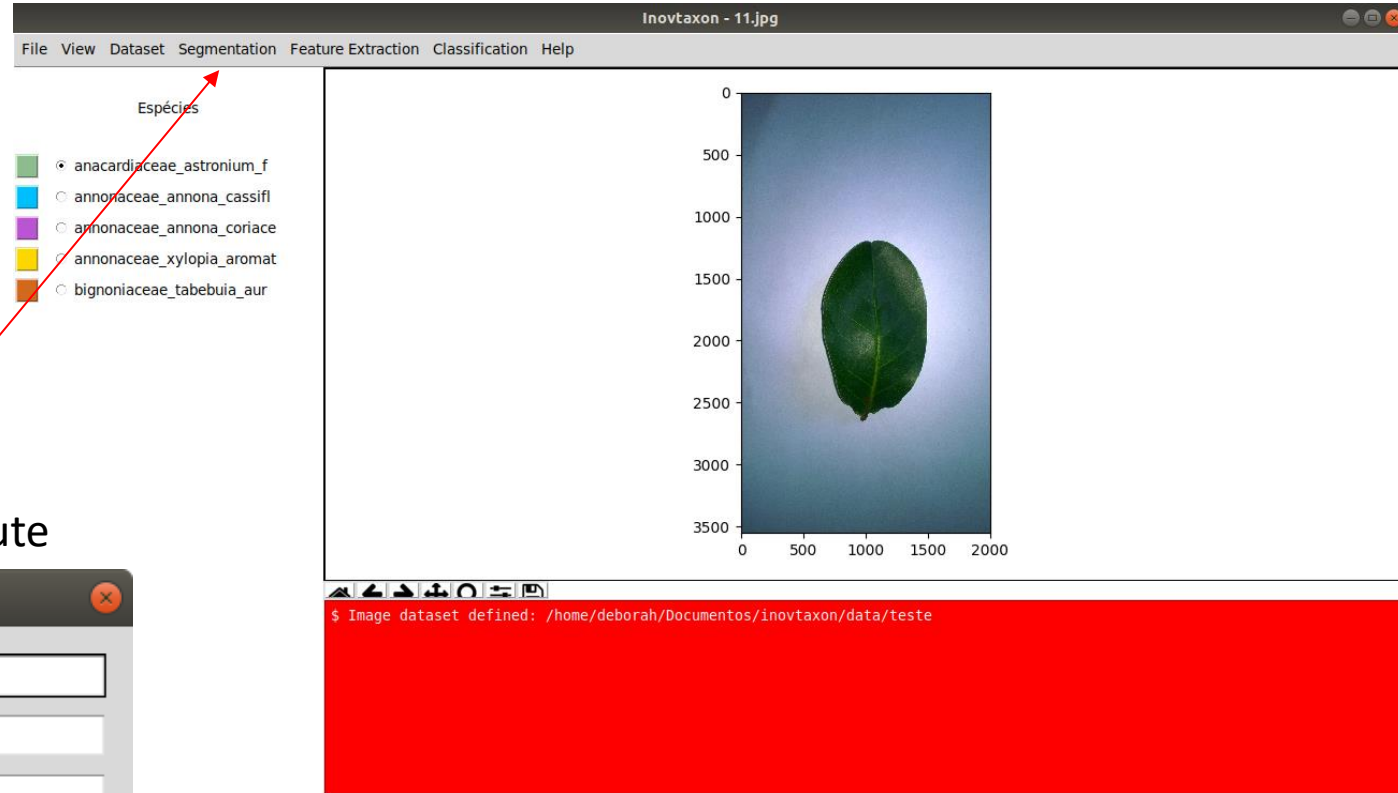
Segments

Sigma

Compactness

Border Color

Border Outline



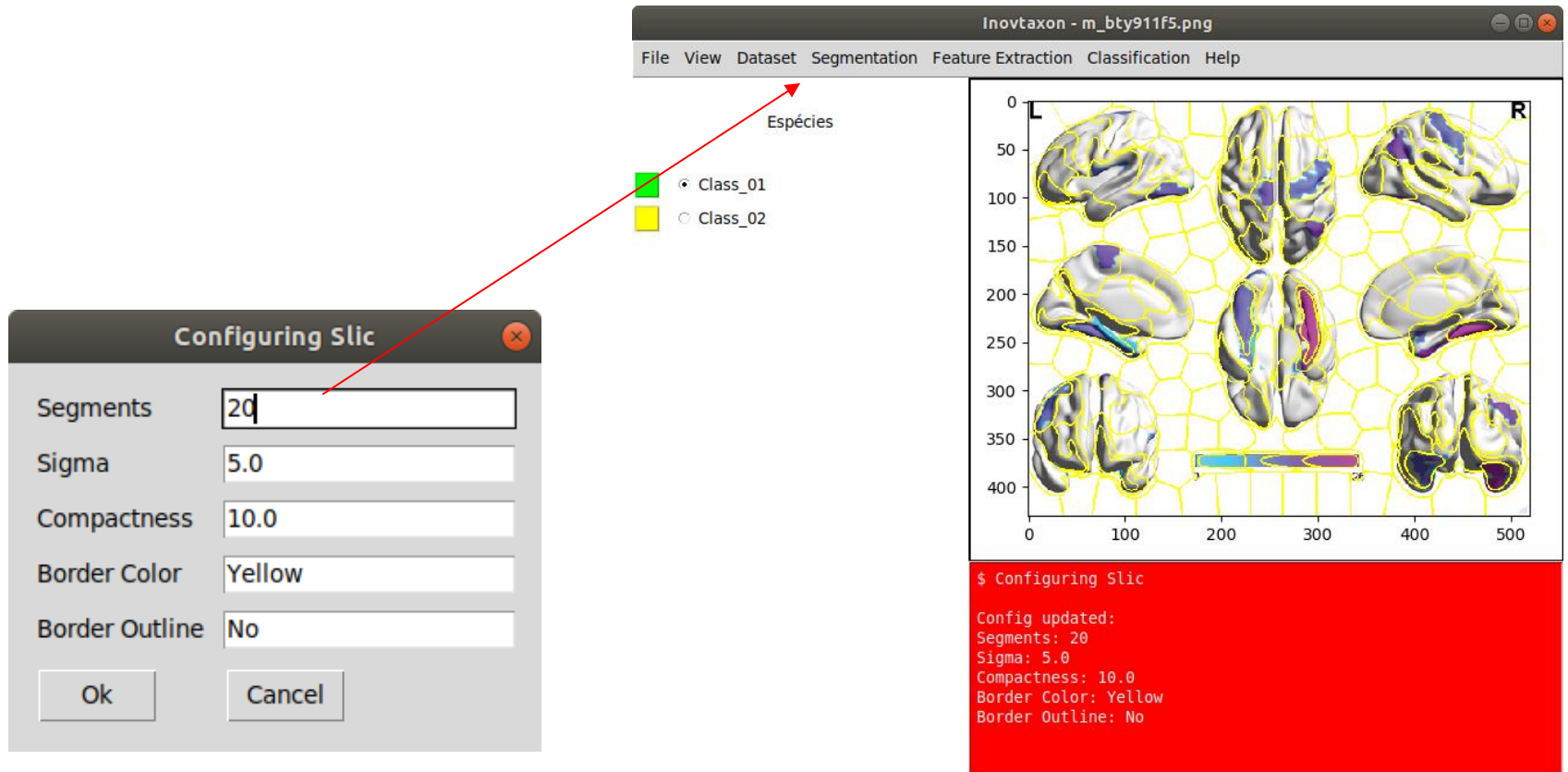
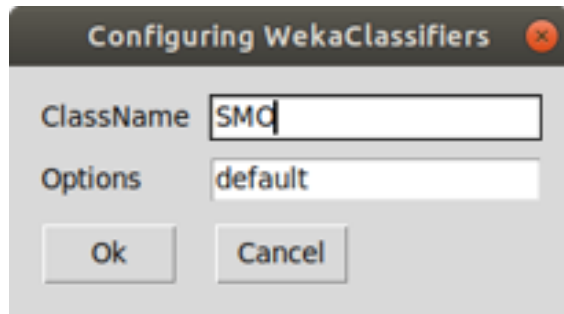
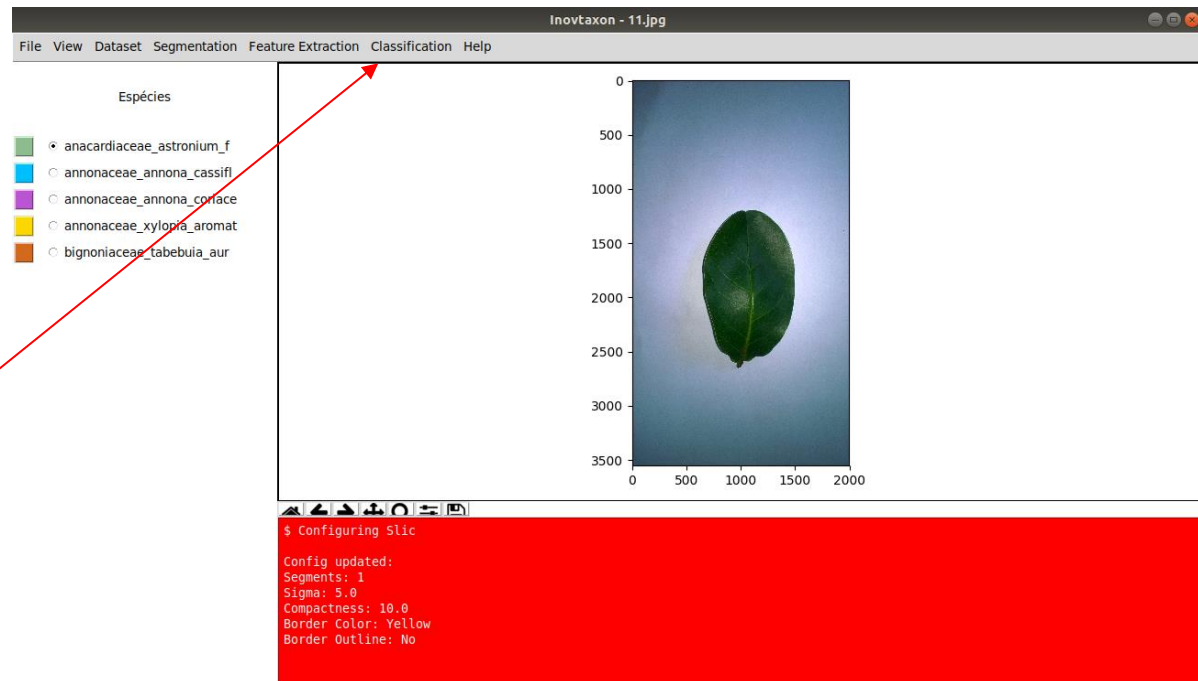


Image: Meiling Wang et al. Discovering network phenotype between genetic risk factors and disease status via diagnosis-aligned multi-modality regression method in Alzheimer's disease, *Bioinformatics*, Volume 35, Issue 11, 1 June 2019, Pages 1948–1957, <https://doi.org/10.1093/bioinformatics/bty911>

Is possible segments of 0-250

Execute



Result

Popup



ClassName: weka.classifiers.functions.SMO
Options: default

Total	7104000	100.00%	
anacardiaceae_astronium_fraxinifolium0			0.00%
annonaceae_annonna_cassiflora7104000		100.00%	
annonaceae_annonna_coriacea0		0.00%	
annonaceae_xylophia_aromatica0		0.00%	
bignoniaceae_tabebuia_aurea0		0.00%	

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