

Kivy: Python no celular e vários outros lugares

O que é Kivy?

Biblioteca multiplataforma em Python para criação de interfaces gráficas para aplicativos

Exemplos



Nie Nie

MDOU Entertainment Limited Casual

★★★★★ 6

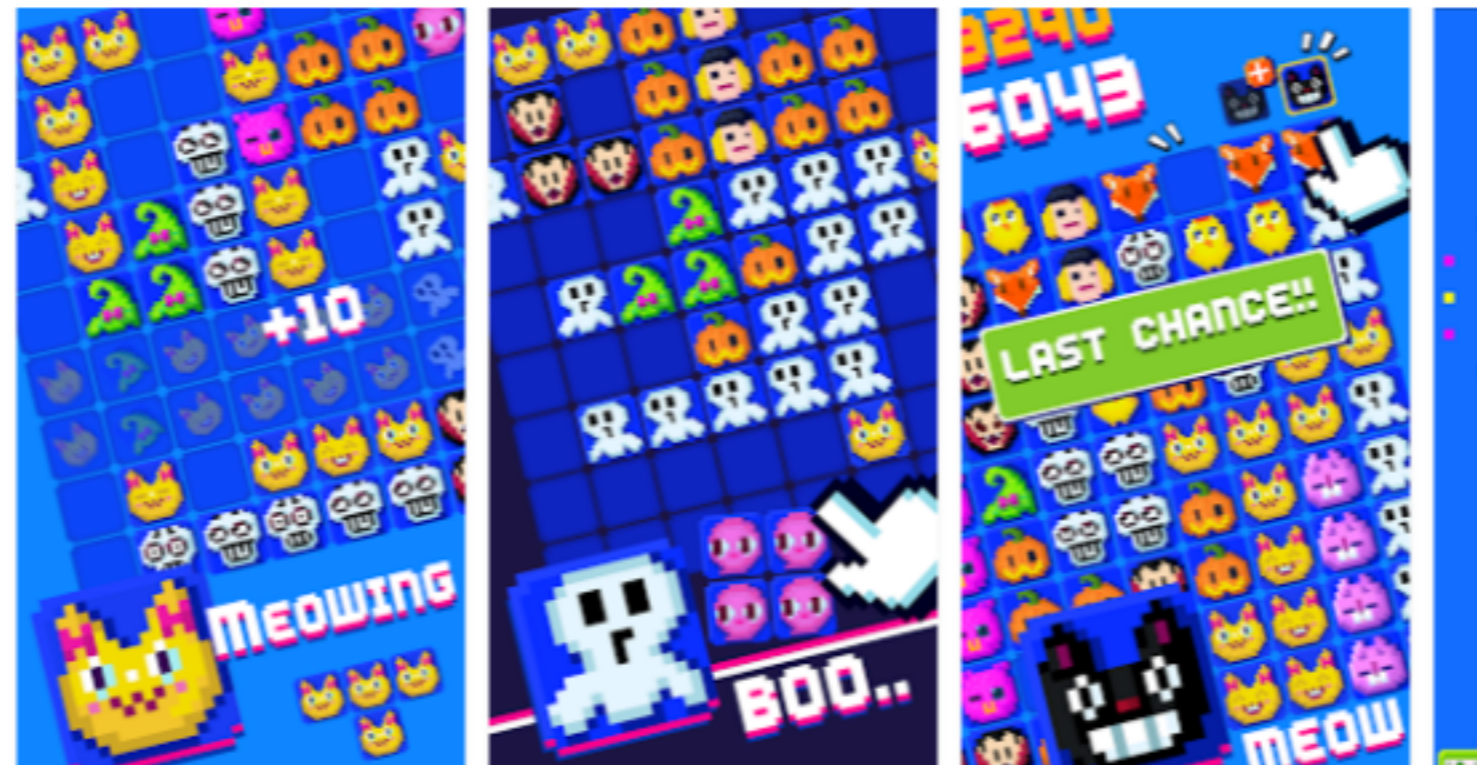


Contém anúncios - Oferece compras no app

Este app é compatível com seu dispositivo.

Adicionar à Lista de desejos

Instalar





Gravity Ride

kpded Arcade

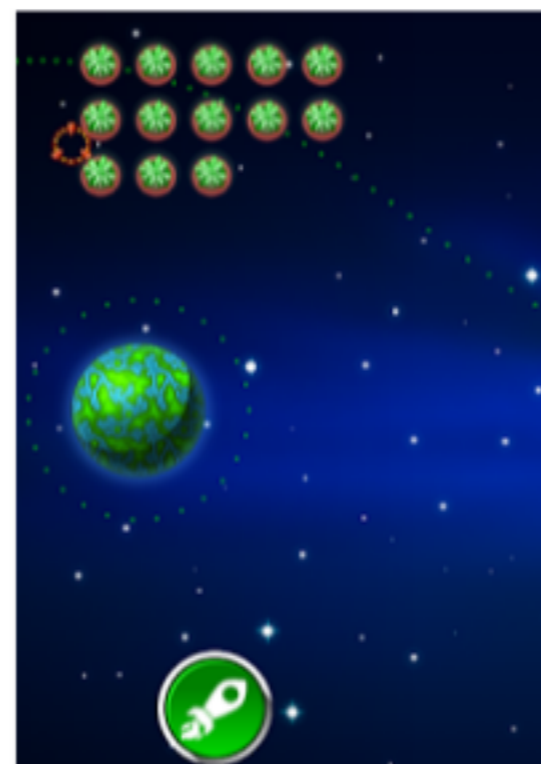
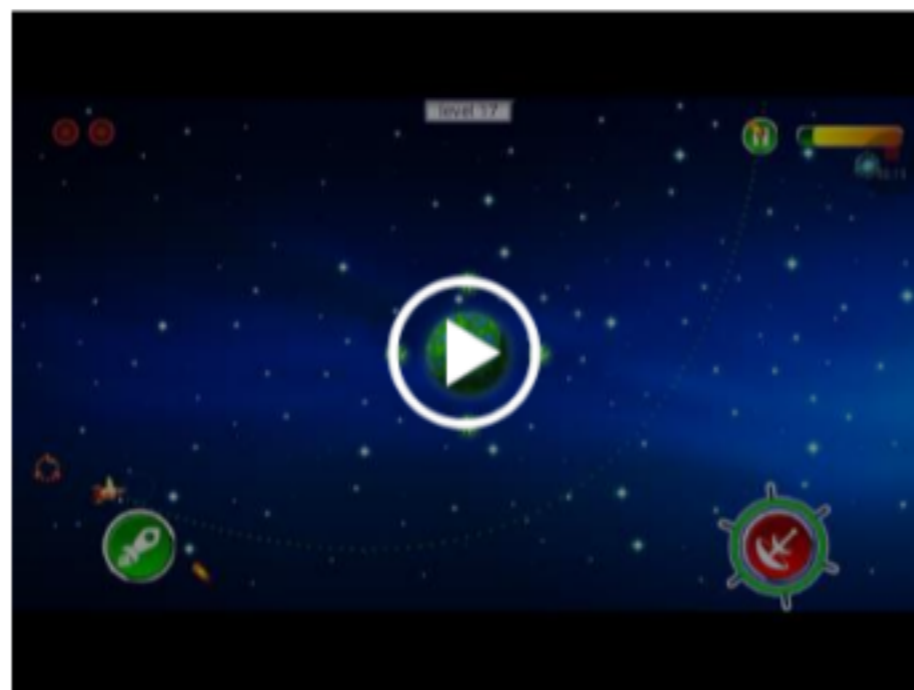
★★★★★ 6



Este app é compatível com seu dispositivo.

 Adicionar à Lista de desejos

Instalar





Barly - Beer Finder & Ratings

Top Banana Technologies Estilo de vida

★★★★★ 104

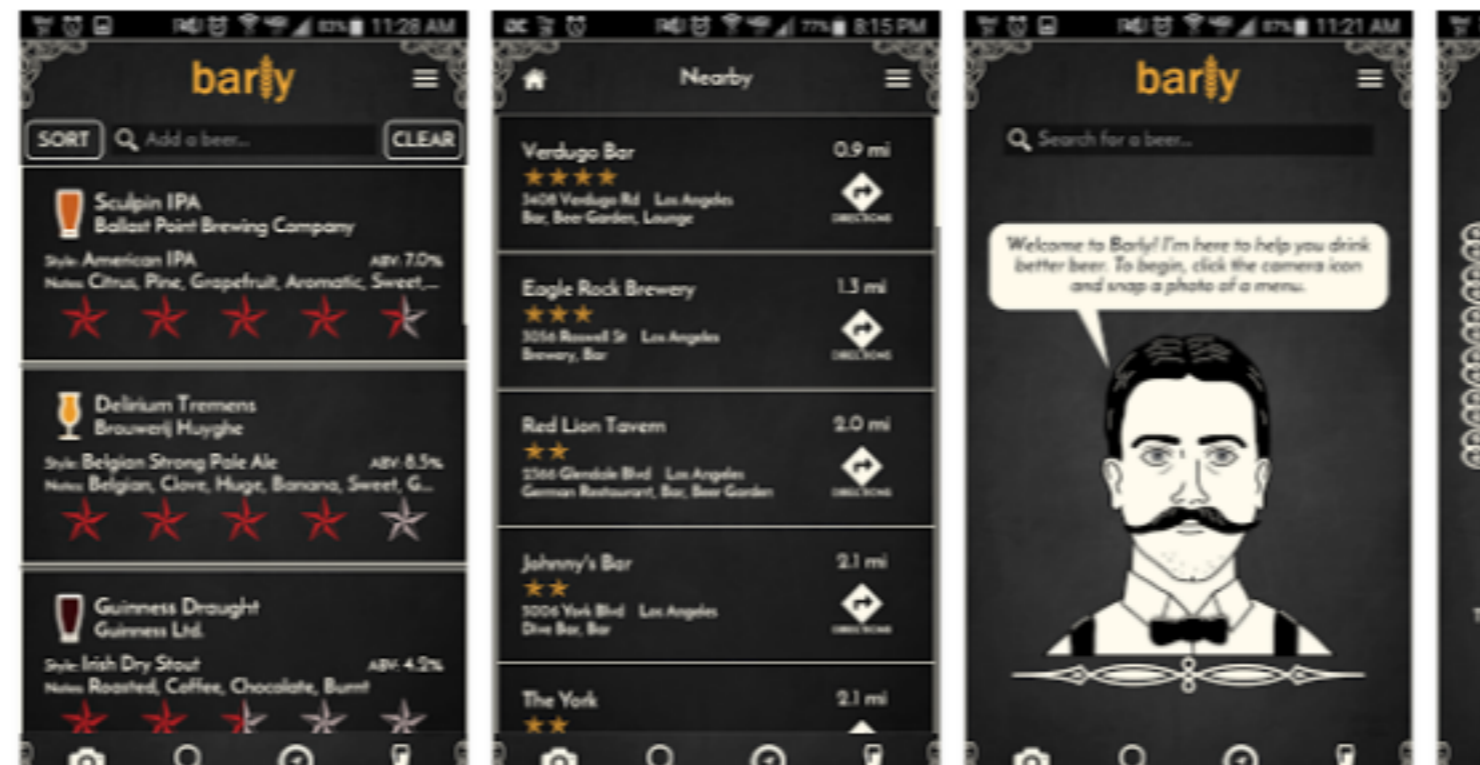
18

Contém anúncios

Este app é compatível com seu dispositivo.

Adicionar à Lista de desejos

Instalar





KOGNITIVO - Brain Training

Sergey Cheparev Educação

★★★★★ 8.773

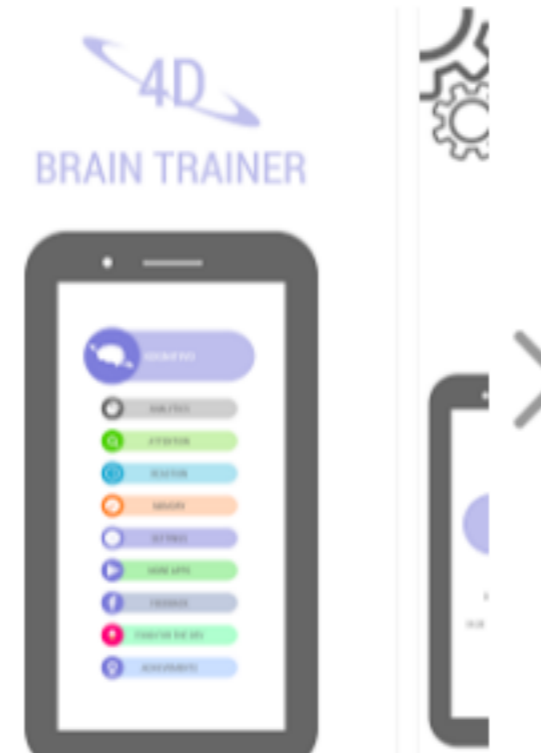
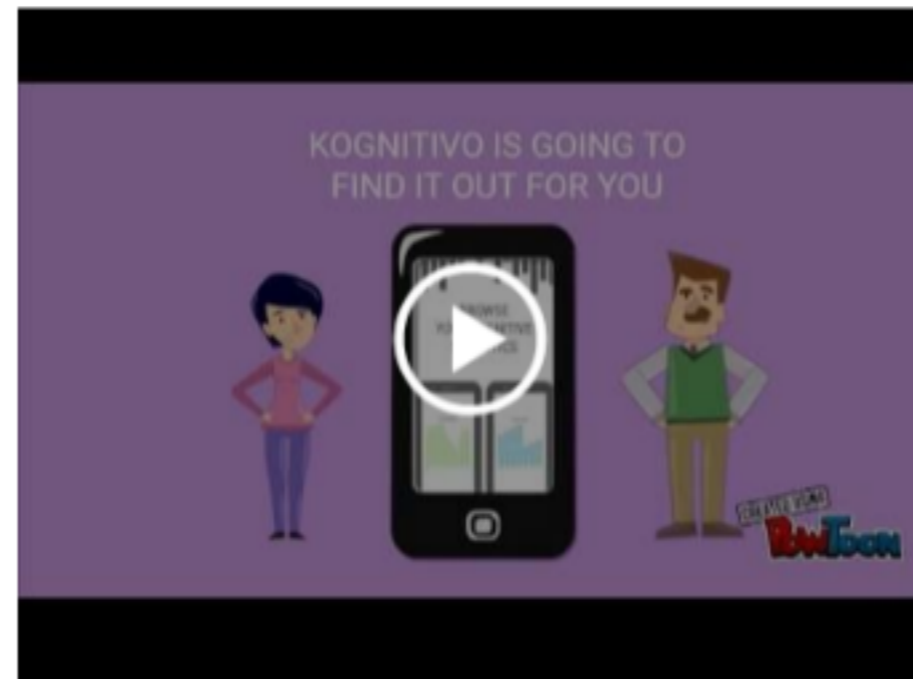


Oferece compras no app

 Este app é compatível com seu dispositivo.

 Adicionar à Lista de desejos

Instalar



pydelhi / **pydelhi_mobile**

Watch 5

Unstar 7

Fork 21

Code

Issues 2

Pull requests 0

Projects 0

Wiki

Insights

Mobile App for PyDelhi

pydelhi

kivy

python

android

ios

crossplatform

237 commits

5 branches

0 releases

10 contributors

AGPL-3.0

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

akshayaaurora committed on **GitHub** Merge pull request #50 from shivan1b/master

Latest commit 940ad80 May 31, 2017

pydelhiconf

Merge pull request #50 from shivan1b/master

May 31, 2017

tools/theming

include smaller icon, load oldjson by default.

Mar 14, 2017

Kivy não é *só* para celulares

Joelzeller / CoPilot

Watch 3

Star 21

Fork 6

Code

Issues 0

Pull requests 0

Projects 0

Wiki

Insights

Raspberry Pi powered in-car infotainment system <http://joelzeller.wixsite.com/copilot>

20 commits

1 branch

0 releases

1 contributor

Branch: master

New pull request

Create new file

Upload files

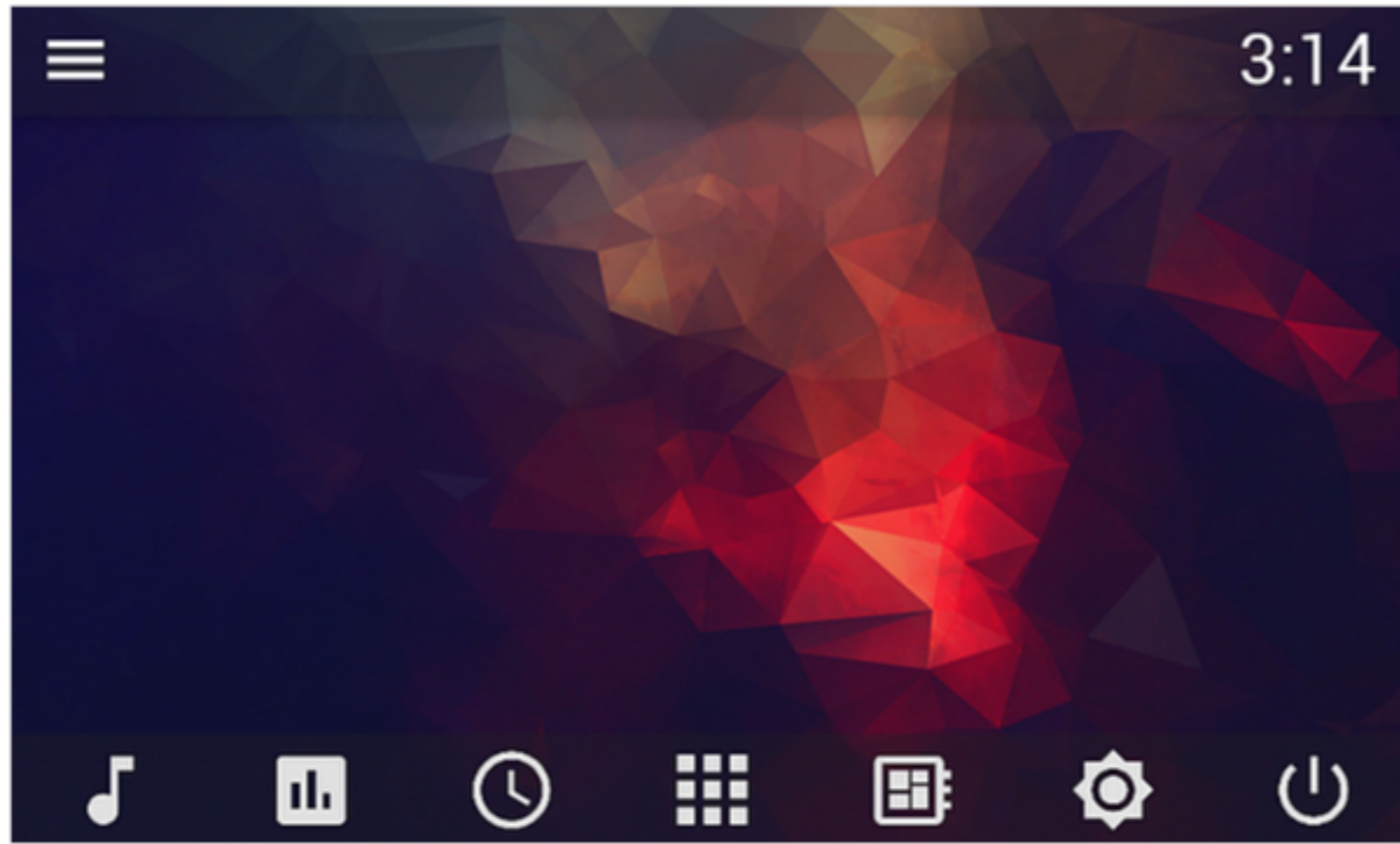
Find file

Clone or download

Joelzeller Version 2.2.0

Latest commit 32244e7 Feb 14, 2017

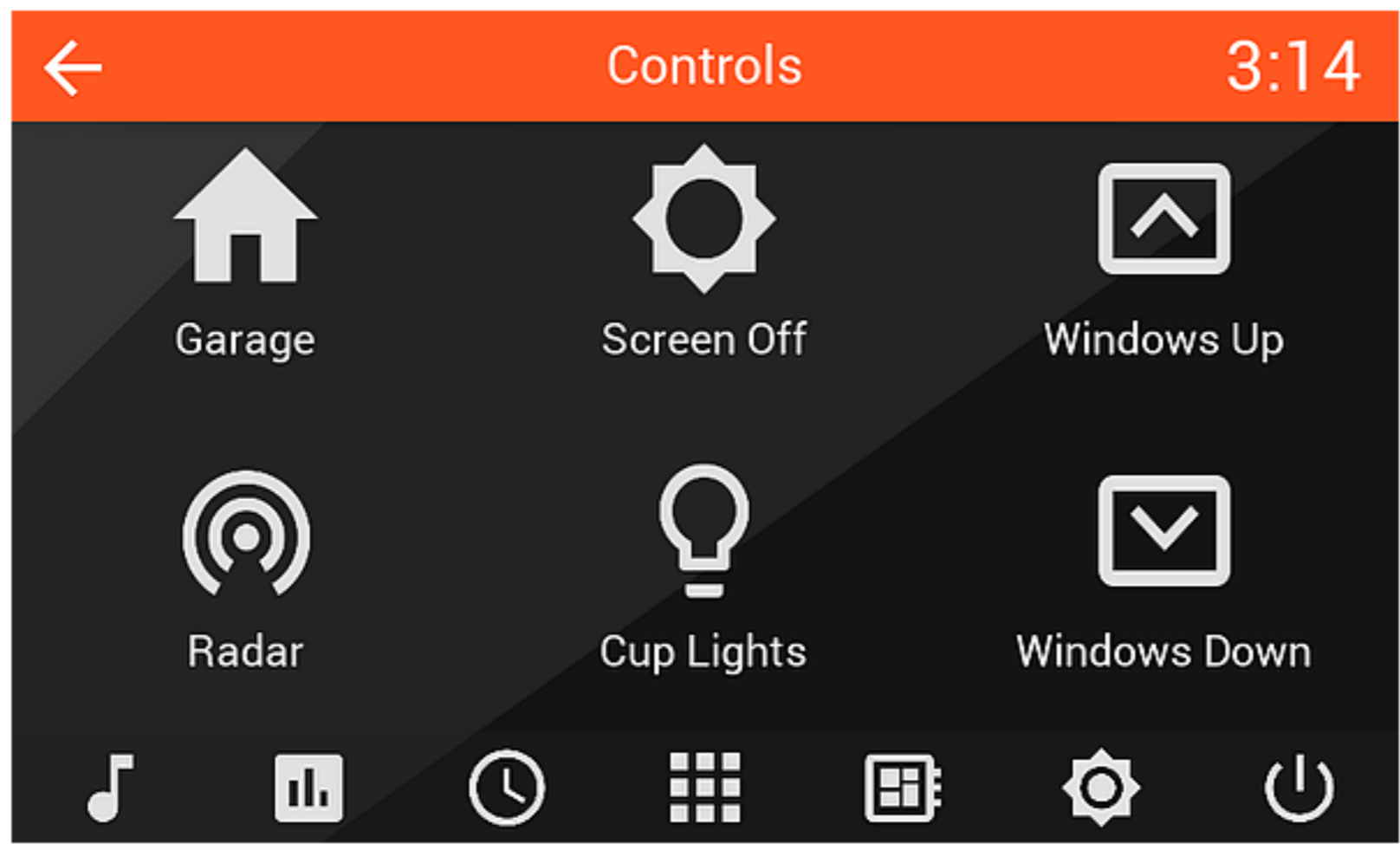
cache	Verison 2.2.0	Feb 14, 2017
data	Verison 2.2.0	Feb 14, 2017
kivymd	Verison 2.2.0	Feb 14, 2017
mapview	Verison 2.2.0	Feb 14, 2017











ODiogoSilva / **TriFusion**

Watch 5 Unstar 19 Fork 7


Code Issues 12 Pull requests 1 Projects 1 Wiki Insights

Streamlining phylogenomic data gathering, processing and visualization

python phylogenetics phylogenomic genetics orthologues gui kivy visualization

2,567 commits 6 branches 6 releases 3 contributors GPL-3.0

Branch: master New pull request Create new file Upload files Find file Clone or download

 ODiogoSilva Fixed issue when parsing pyrad/ipyrad loci files. Latest commit 9a3cae4 Jun 8, 2017
docs removed dep May 23, 2017
examples Added Statistics plot for Allele Frequency Spectrum. #180 Jun 1, 2016
trifusion Fixed issue when parsing pyrad/ipyrad loci files. Jun 8, 2017



Welcome to TriFusion

Streamlining phylogenomic data gathering, processing and visualization

Start by clicking 'Menu > Open file(s)', by typing 'Ctrl + O' or simply **drag and drop** your files into TriFusion's window

Quick Open Project

O	10 proteomes	🗑️
O	51 proteomes	🗑️
P	141 files	🗑️
P	1 rev file	🗑️
P	3093_376_large	🗑️
P	3k_singlefile	🗑️

O Orthology project **P** Process project

Operations:

Search

Explore

Group file(s)

group_3.txt

Compare

Graphical visualization



Select analysis

Taxa distribution

Description

Distribution of the number of taxa across clusters

Generate plot

General information

1,455,828
Proteins

10
Taxa

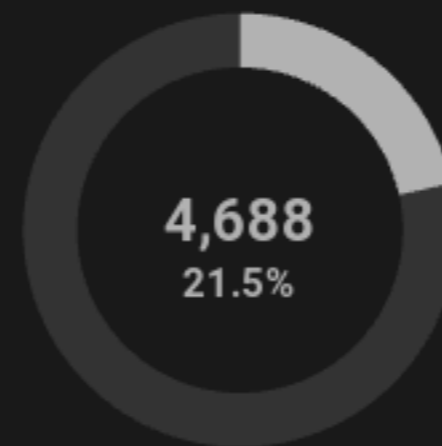
21,778
Total orthologs

✓ 2961 orthologs successfully exported

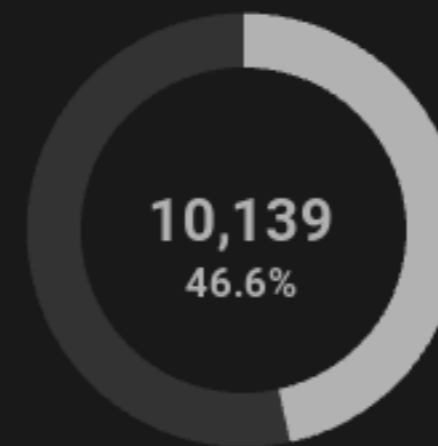
Filtered orthologs

Export as...

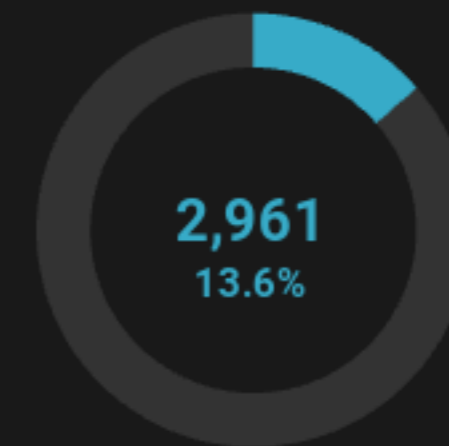
After species filter



After gene filter



Final orthologs



Change filters

Maximum gene copies: 1

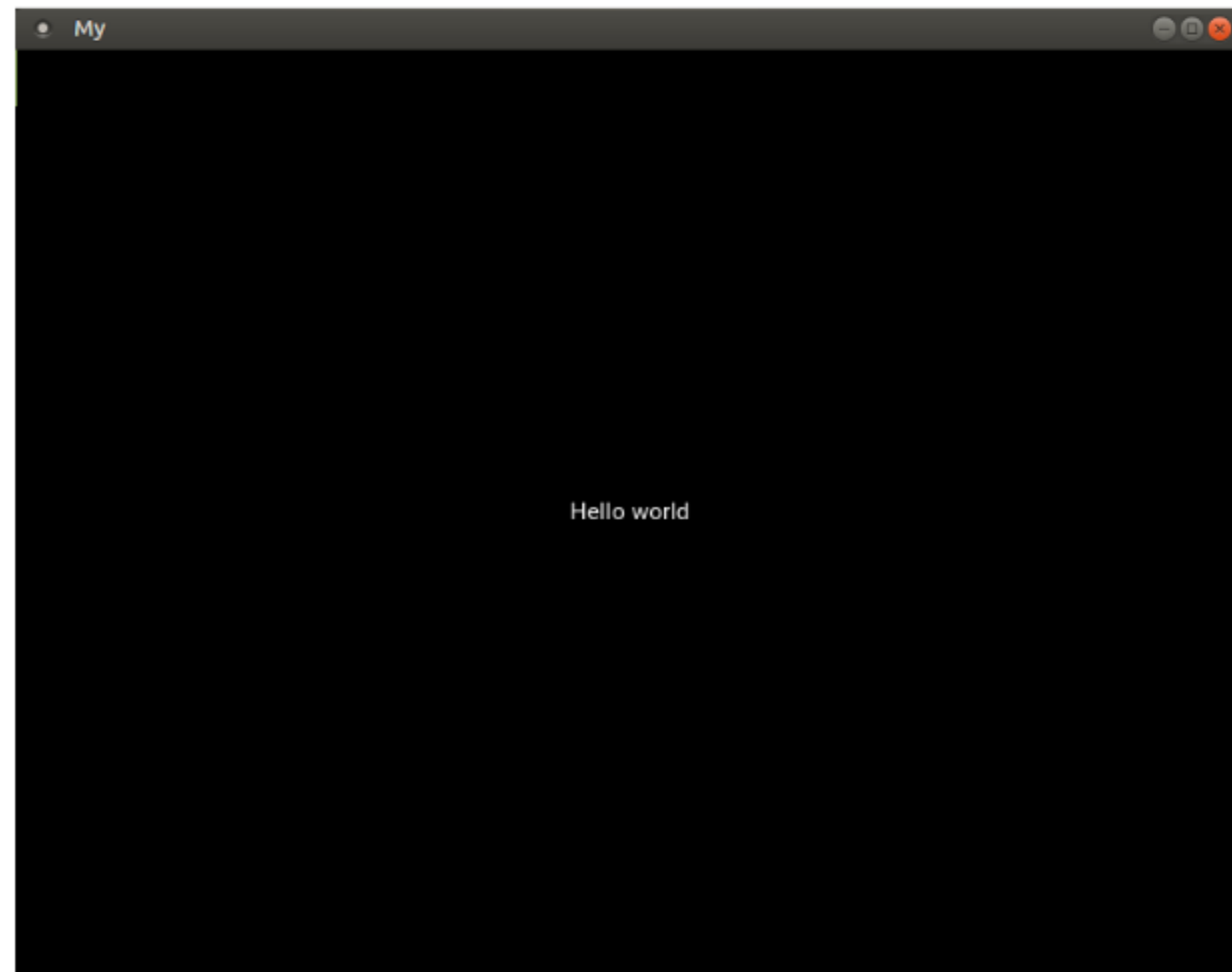
Minimum taxa representation: 5

Excluded taxa: 0

Generate full report

Hello World

```
1 import kivy
2 kivy.require('1.9.1')
3
4 from kivy.app import App
5 from kivy.uix.label import Label
6
7
8 class MyApp(App):
9
10     def build(self):
11         return Label(text='Hello world')
12
13
14 if __name__ == '__main__':
15     MyApp().run()
```



Widgets

- ActionBar
- Label
- ToggleButton
- CodeInput
- FileBrowser



The screenshot shows an IDE window titled "Aplicativo Bom". The code editor contains the following Python code:

```
def olar():  
    print('olar mundo!')
```

Below the code editor is a file browser with a tree view. The tree view has two columns: "Name" and "Size". The structure is as follows:

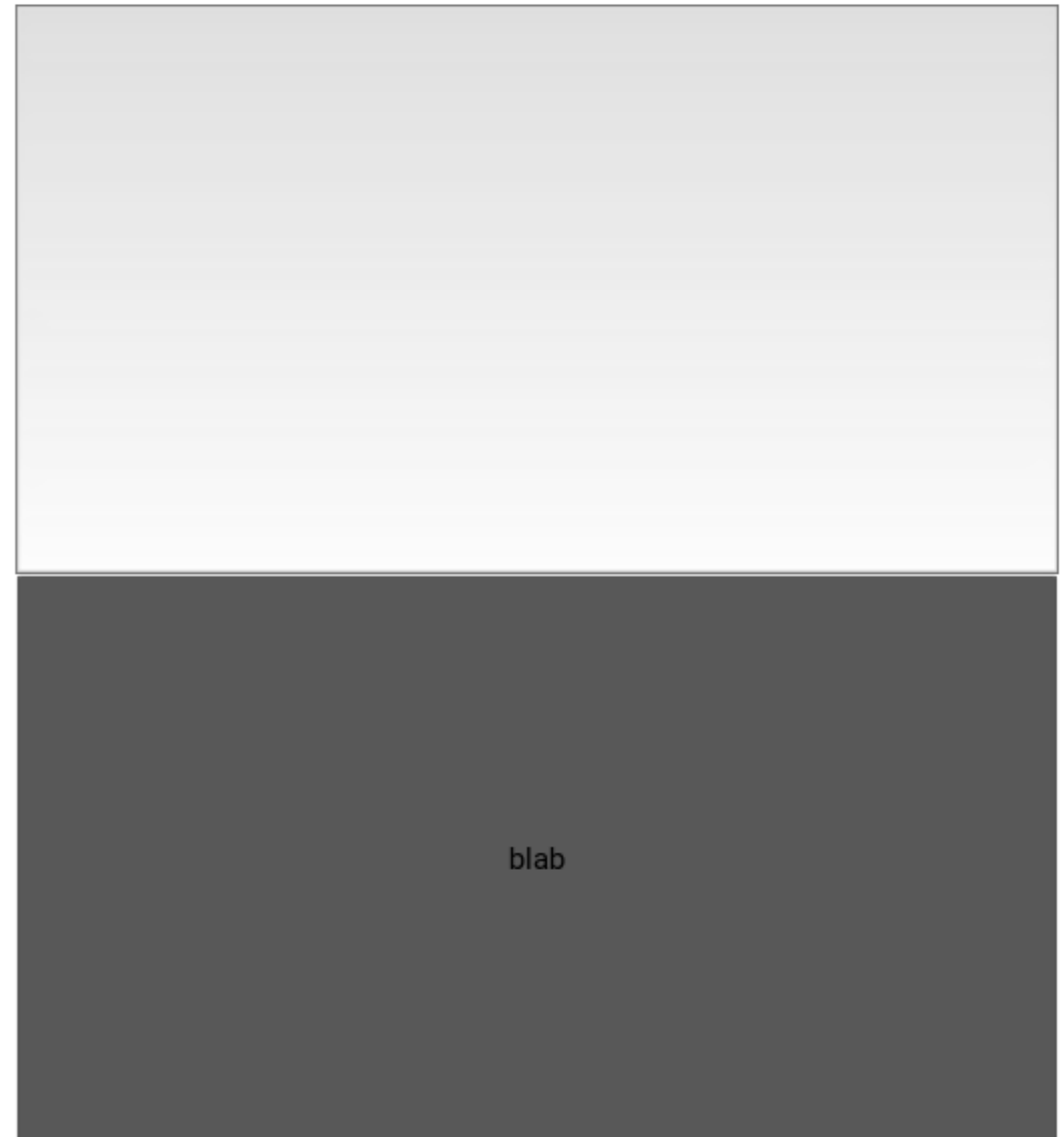
- 3rd_app_src
 - ampache
 - cefpython
 - api
 - docs
 - examples
 - patches
 - src
 - tools

Duas formas de montar a interface

- Python
- Kv Lang

Montando a interface (Python)

```
1 from kivy.app import App
2 from kivy.uix.boxlayout import BoxLayout
3 from kivy.uix.textinput import TextInput
4 from kivy.uix.button import Button
5
6
7 class MyApp(App):
8
9     def build(self):
10         root_widget = BoxLayout(orientation="vertical")
11         root_widget.add_widget(TextInput())
12         root_widget.add_widget(Button(text='blab'))
13
14         return root_widget
15
16
17 if __name__ == '__main__':
18     MyApp().run()
```



Montando a interface (Kv Lang <3)

myapp.kv

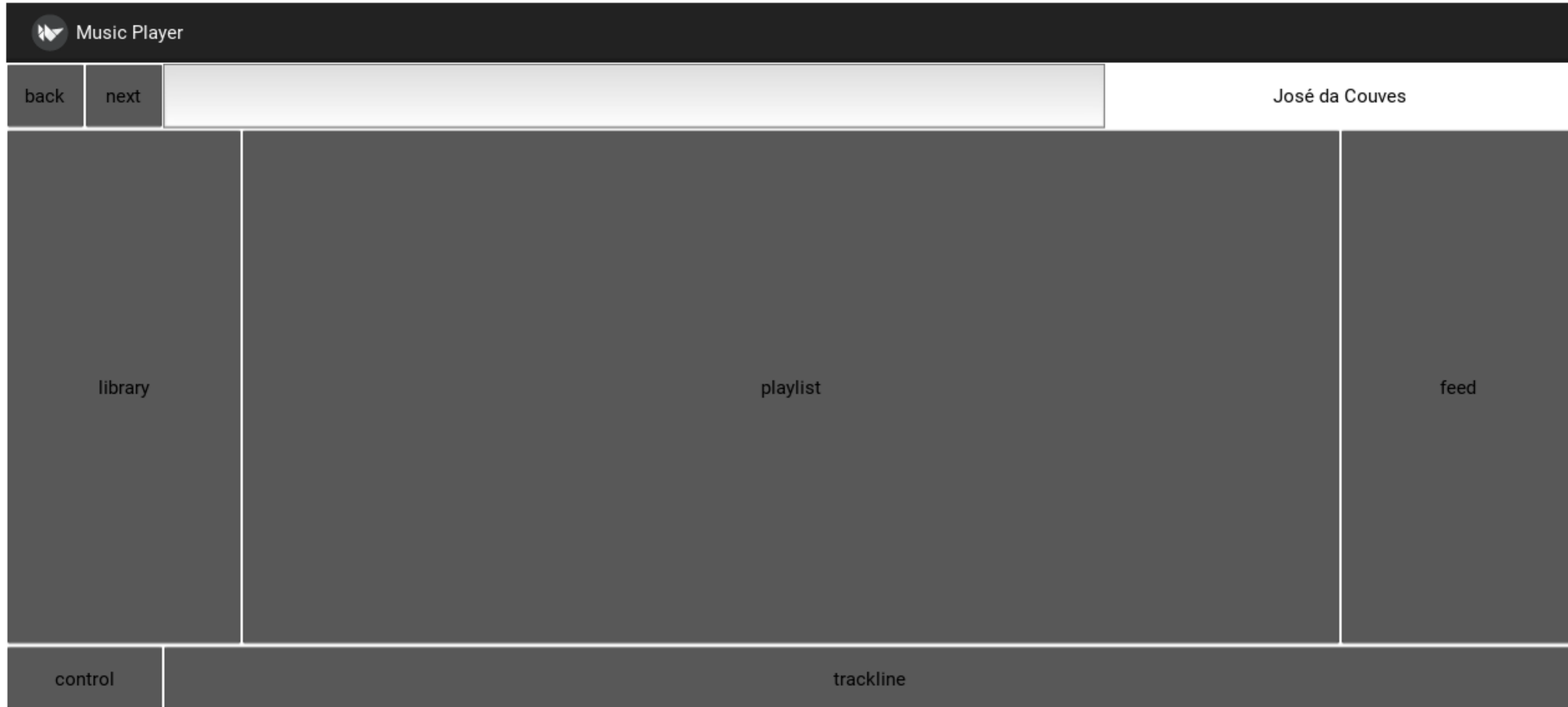
```
1 BoxLayout:
2     orientation: "vertical"
3
4     TextInput:
5     BoxLayout:
6         |     Button:
7         |     |     text: "blab"
```

myapp.py

```
1 from kivy.app import App
2
3
4 class MyApp(App):
5     pass
6
7
8 if __name__ == '__main__':
9     MyApp().run()
```

Demo

Criando a interface



Por que usar a Kv Lang?

As interfaces podem ser complexas e, se você não separar a lógica do layout, seu código vai ficar **muito** confuso.

Ajuda nas interfaces: Kivy Inspector

```
python main.py -m inspector  
<ctrl> + e  
(Pulo do Gato!)
```

Introdução a Kv Lang (PySE 2016)

[speakerdeck.com
/diegodukao/kivy-introducao-a-kv-lang](http://speakerdeck.com/diegodukao/kivy-introducao-a-kv-lang)

Interface com uma cara conhecida

KivyMD

- Google Material Design para o Kivy
- gitlab.com/kivymd/KivyMD

Demo

Acesso aos recursos do celular: Plyer!

```
from plyer import Camera  
Camera.take_picture(filename, callback)
```

Platform	Android	iOS	Windows	OS X	Linux
Accelerometer	X	X		X	X
Call	X	X			
Camera (taking picture)	X	X			
GPS	X	X			
Notifications	X		X	X	X
Text to speech	X	X	X	X	X
Email (open mail client)	X	X	X	X	X
Vibrator	X	X			
Sms (send messages)	X	X			
Compass	X	X			
Unique ID	X	X	X	X	X
Gyroscope	X	X			
Battery	X	X	X	X	X
Native file chooser			X	X	X
Orientation	X				
Audio recording	X				
Flash	X	X			
Wifi			X	X	X

Kivy Garden <3

Repositório de widgets feitos pela comunidade

```
pip install kivy-garden  
garden install androidtabs
```





Kivy Garden

<https://kivy.org/docs/api-kivy.garden.html>

kivy-users@googlegroups.com

 **Repositories**

 People **8**

Filters ▾

Find a repository...

[garden.filebrowser](#)

Python ★ 18  12

An advanced file browser.

Updated 11 days ago

[garden.mapview](#)

Python ★ 41  16

Mapview is a Kivy widget for displaying interactive maps.

Updated 15 days ago

[garden.xcamera](#)

Python ★ 2  1

Kivy widget for taking pictures with the camera, optimized for Android. It uses the native Android's APIs to take the pictures, thus ensuring good quality, high resolution, auto-focus, etc.

Updated 26 days ago

[garden.animlabel_bezier](#)

Python ★ 0  0

an extension of the animlabel tool, to make a label follow a bezier path

Updated on Sep 18

Exemplos no GitHub

[diegodukao/lamusga](#)

[diegodukao/saigon-client](#)

[diegodukao/slides-pyrj](#)

[diegodukao/pydelhi_mobile/](#)

[gouzouni/Composite-Index-Modeler](#)

[natorsc/safadometro-kivy](#)

Empacotando para celular: Buildozer

```
buildozer init  
<editar buildozer.spec>  
buildozer android release
```

```
X
raise IOError(msg)
IOError: invalid Python installation: unable to open /usr/lib/python2.7/config/Makefile (No such file or directory)
Makefile:972: recipe for target 'Lib/plat-linux4' failed
make: *** [Lib/plat-linux4] Error 1
make: *** Waiting for unfinished jobs....
./Modules/cPickle.c: In function 'load':
./Modules/cPickle.c:4460:8: warning: assuming signed overflow does not occur when assuming that (X - c) > X is always false [-Wstrict-overflow]
    if (!(len=self->stack->length) >= x
        ^
./Modules/cPickle.c: In function 'Unpickler_noload':
./Modules/cPickle.c:202:8: warning: assuming signed overflow does not occur when assuming that (X - c) > X is always false [-Wstrict-overflow]
    if (clearto >= self->length) return 0;
        ^
./Modules/cPickle.c:202:8: warning: assuming signed overflow does not occur when assuming that (X - c) > X is always false [-Wstrict-overflow]
    if (clearto >= self->length) return 0;
        ^

STDERR:

First python2 make failed. This is expected, trying again.
Second install (expected to work)
[INFO]: -> running touch python.exe python
[INFO]: -> running make -j5 install HOSTPYTHON=/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/other_builds/python2-...(and 240 more)
working: /home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/other_builds/python2-openssl/armeabi-v7a/python2/hostpython.. [INFO]: -> run
ning rm -rf python-install/lib/python2.7/test
[INFO]: -> running rm -rf python-install/lib/python2.7/json/tests
[INFO]: -> running rm -rf python-install/lib/python2.7/lib-tk
[INFO]: -> running rm -rf python-install/lib/python2.7/sqlite3/test
[INFO]: -> running rm -rf python-install/lib/python2.7/unittest, test
[INFO]: -> running rm -rf python-install/lib/python2.7/lib2to3/tests
[INFO]: -> running rm -rf python-install/lib/python2.7/bsddb/tests
[INFO]: -> running rm -rf python-install/lib/python2.7/distutils/tests
[INFO]: -> running rm -rf python-install/lib/python2.7/email/test
[INFO]: -> running rm -rf python-install/lib/python2.7/curses
[INFO]: <- directory context /home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/python-for-android-master
[INFO]: -> running cp -a /home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/other_builds/python2-openssl/armeabi-v7a/py...(and 128 more)
[INFO]: Copying hostpython binary to targetpython folder
[INFO]: -> running cp /home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/other_builds/hostpython2/desktop/hostpython2/h...(and 133 more)
[INFO]: -> running cp /home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/other_builds/python2-openssl/armeabi-v7a/pytho...(and 139 more)
[INFO]: Building sdl2 for armeabi-v7a
[INFO]: -> directory context /home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/bootstrap_builds/sdl2-python2/jni
[INFO]: -> running ndk-build V=1
working: [armeabi-v7a] Compile thumb : SDL2_image <= pngread.c linux-x86_64/bin/arm-l...(and 1799 more)
```

File Edit View Terminal Tabs Help

Traceback (most recent call last):

```
File "/usr/lib/python2.7/threading.py", line 801, in __bootstrap_inner
    self.run()
File "/usr/lib/python2.7/threading.py", line 754, in run
    self._target(*self._args, **self._kwargs)
File "/home/diego/.local/lib/python2.7/site-packages/sh.py", line 1540, in wrap
    fn(*args, **kwargs)
File "/home/diego/.local/lib/python2.7/site-packages/sh.py", line 2459, in background_thread
    handle_exit_code(exit_code)
File "/home/diego/.local/lib/python2.7/site-packages/sh.py", line 2157, in fn
    return self.command.handle_command_exit_code(exit_code)
File "/home/diego/.local/lib/python2.7/site-packages/sh.py", line 815, in handle_command_exit_code
    raise exc
```

ErrorReturnCode_1:

```
RAN: /home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/python-installs/conference/bin/python.host setup.py build_ext -v
```

STDOUT:

```
/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/python-installs/conference/lib/python2.7/distutils/dist.py:267: UserWarning: Unknown distribution option: 'install_requires'
  warnings.warn(msg)
running build_ext
building 'jnius' extension
creating build
creating build/temp.linux-x86_64-2.7
creating build/temp.linux-x86_64-2.7/jnius
/usr/bin/ccache arm-linux-androideabi-gcc -DANDROID -mandroid -fomit-frame-pointer --sysroot /home/diego/.buildozer/android/platform/android-ndk-r9c/platforms/android-19/arch-arm -DNDEBUG -g -O3 -Wall -Wstrict-prototypes -DANDROID -mandroid -fomit-frame-pointer --sysroot /home/diego/.buildozer/android/platform/android-ndk-r9c/platforms/android-19/arch-arm -march=armv7-a -mfloat-abi=softfp -mfpu=vfp -mthumb -fPIC -I/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/python-installs/conference/include/python2.7 -c jnius/jnius.c -o build/temp.linux-x86_64-2.7/jnius/jnius.o
arm-linux-androideabi-gcc: error: jnius/jnius.c: No such file or directory
arm-linux-androideabi-gcc: fatal error: no input files
compilation terminated.
error: command '/usr/bin/ccache' failed with exit status 1
```

STDERR:

```
[INFO]: pyjnius first build failed (as expected)
[INFO]: Running cython where appropriate
[INFO]: Cythonize jnius/jnius.pyx
[INFO]: -> running cython ./jnius/jnius.pyx
[INFO]: -> running python.host setup.py build_ext -v
working: building 'jnius' extension
```

```
* use_sdl2 = 1
* use_ios = 0
* use_mesagl = 0
* use_x11 = 0
* use_gstreamer = 0
* use_avfoundation = 0
* use_osx_frameworks = 0
* debug_gl = 0
* debug = False
Updated kivy/include/config.h
Updated kivy/include/config.pxi
Updated kivy/setupconfig.py
Detected compiler is unix
building 'kivy.core.text._text_sdl2' extension
creating build
creating build/temp.linux-x86_64-2.7
creating build/temp.linux-x86_64-2.7/kivy
creating build/temp.linux-x86_64-2.7/kivy/core
creating build/temp.linux-x86_64-2.7/kivy/core/text
/usr/bin/ccache arm-linux-androideabi-gcc -DANDROID -mandroid -fomit-frame-pointer --sysroot /home/diego/.buildozer/android/platform/android-ndk-r9c/platforms/android-19/arch-arm -DNDEBUG -g -O3 -Wall -Wstrict-prototypes -DANDROID -mandroid -fomit-frame-pointer --sysroot /home/diego/.buildozer/android/platform/android-ndk-r9c/platforms/android-19/arch-arm -march=armv7-a -mfloat-abi=softfp -mfpu=vfp -mthumb -fPIC -Ikivy/include -I/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/bootstrap_builds/sdl2-python2/jni/SDL/include -I/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/bootstrap_builds/sdl2-python2/jni/SDL2_image -I/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/bootstrap_builds/sdl2-python2/jni/SDL2_mixer -I/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/bootstrap_builds/sdl2-python2/jni/SDL2_ttf -I/usr/include/SDL2 -I/home/diego/Projects/kivy/pydelhi_mobile/.buildozer/android/platform/build/build/python-installs/conference/include/python2.7 -c kivy/core/text/_text_sdl2.c -o build/temp.linux-x86_64-2.7/kivy/core/text/_text_sdl2.o
arm-linux-androideabi-gcc: error: kivy/core/text/_text_sdl2.c: No such file or directory
arm-linux-androideabi-gcc: fatal error: no input files
compilation terminated.
error: command '/usr/bin/ccache' failed with exit status 1

STDERR:

[INFO]: kivy first build failed (as expected)
[INFO]: Running cython where appropriate
[INFO]: Cythonize kivy/properties.pyx
[INFO]: -> running cython ./kivy/properties.pyx
[INFO]: Cythonize kivy/weakproxy.pyx
[INFO]: -> running cython ./kivy/weakproxy.pyx
[INFO]: Cythonize kivy/_clock.pyx
[INFO]: -> running cython ./kivy/_clock.pyx
[INFO]: Cythonize kivy/_event.pyx
[INFO]: -> running cython ./kivy/_event.pyx
```

Principais motivos para não usar Kivy:

"É mais lento que o nativo"

Principais motivos para não usar Kivy:

"É mais lento que o nativo"

- Uma alternativa multiplataforma **sempre** vai ser mais lenta que a nativa.

Principais motivos para não usar Kivy:

"Como não usamos a biblioteca gráfica padrão (Android, iOS, etc), não mantém o ~look and feel~ da plataforma e perdemos recursos como acessibilidade"

Principais motivos para não usar Kivy:

"Como não usamos a biblioteca gráfica padrão (Android, iOS, etc), não mantém o ~look and feel~ da plataforma e perdemos recursos como acessibilidade"

Kivy Garden + KivyMD solucionam as duas coisas! \o/
(Basta que alguém implemente os widgets e disponibilize)

Principais motivos para não usar Kivy:

"É muito complicado!"

Principais motivos para não usar Kivy:

"É muito complicado!"

Por favor, testem vocês mesmos! =)
E tenham paciência.

Obrigado! =)