

Cross-Platform Apps Dev in Python

2013: Back to the desktop



<http://www.gmvault.org>

Guillaume Aubert : Creator of Gmvault



<http://www.gmvault.org>

: @zoobert

: gaubert

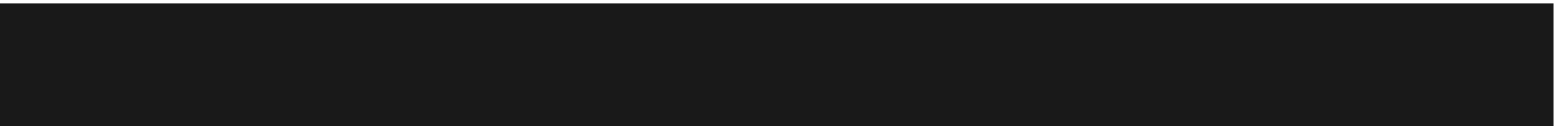
Future of Python ?

- Have to seriously think on the future of Python
- Strong in the scientific community
- Web Backend: Was and still strong but
 - HTML5/javascript will soon everywhere
- Server Side, New comer: go lang, ...
- Python doesn't want to be the next Fortran

**Find new areas
of growth for
Python**



Develop Desktop Cross Platform Apps



Many distribution platforms

The screenshot displays the Mac App Store interface. At the top, there are navigation tabs: Featured, Top Charts, Categories, Purchases, and Updates. A search bar is located on the right side of the top navigation bar. The main content is divided into two sections: 'Top Paid' and 'Top Free'. Each section contains a grid of 12 app tiles. Each tile includes an app icon, a rank number, the app name, category, star rating, number of ratings, and price. The 'Top Paid' section lists apps like OS X Mountain Lion, Pages, and Keynote. The 'Top Free' section lists apps like Bridge Construct..., Evernote, and Xcode. On the right side, there are two vertical panels: 'Quick Links' with links for Welcome, Account, Redeem, and Support; and 'Top Charts Categories' with a list of categories such as Business, Developer Tools, Education, etc.

Top Paid See All >

Rank	App Name	Category	Rating	Ratings	Price
1.	OS X Mountain Lion	Productivity	★★★★★	24	£13.99
2.	Pages	Productivity	★★★★★	117	£13.99
3.	Keynote	Productivity	★★★★★	29	£13.99
4.	Numbers	Productivity	★★★★★	35	£13.99
5.	Sky Gamblers - S...	Games	★★★★★	36	£2.99
6.	FaceTime	Social Networking	★★★★★	246	£0.69
7.	iPhoto	Photography	★★★★★	27	INSTALLED
8.	Pixelmator	Graphics & Design	★★★★★	75	INSTALLED
9.	Quartet for Keynote	Productivity	★★★★★		£7.49
10.	RollerCoasterTy...	Games	★★★★★	101	£20.99
11.	Aperture	Photography	★★★★★	538	£54.99
12.	Logic Pro	Music	★★★★★	87	£130.99

Top Free See All >

Rank	App Name	Category	Rating	Ratings	Price
1.	Bridge Construct..	Games	★★★★★	107	FREE
2.	Evernote	Productivity	★★★★★	9	UPDATE
3.	Xcode	Developer Tools	★★★★★	313	UPDATE
4.	Twitter	Social Networking	★★★★★	15	FREE
5.	Fotor Photo Edito...	Photography	★★★★★	63	FREE
6.	The Unarchiver	Utilities	★★★★★	29	FREE
7.	Kindle	Reference	★★★★★	55	FREE
8.	Smart Converter	Video	★★★★★	56	INSTALLED
9.	VirtualDJ Home	Music	★★★★★	254	FREE
10.	TweetDeck	Social Networking	★★★★★	397	FREE
11.	iBooks Author	Productivity	★★★★★	49	FREE
12.	SketchBook Expr...	Graphics & Design	★★★★★	433	EXPRESS INSTALL

Quick Links

- Welcome Guillaume
- Account
- Redeem
- Support

Top Charts Categories

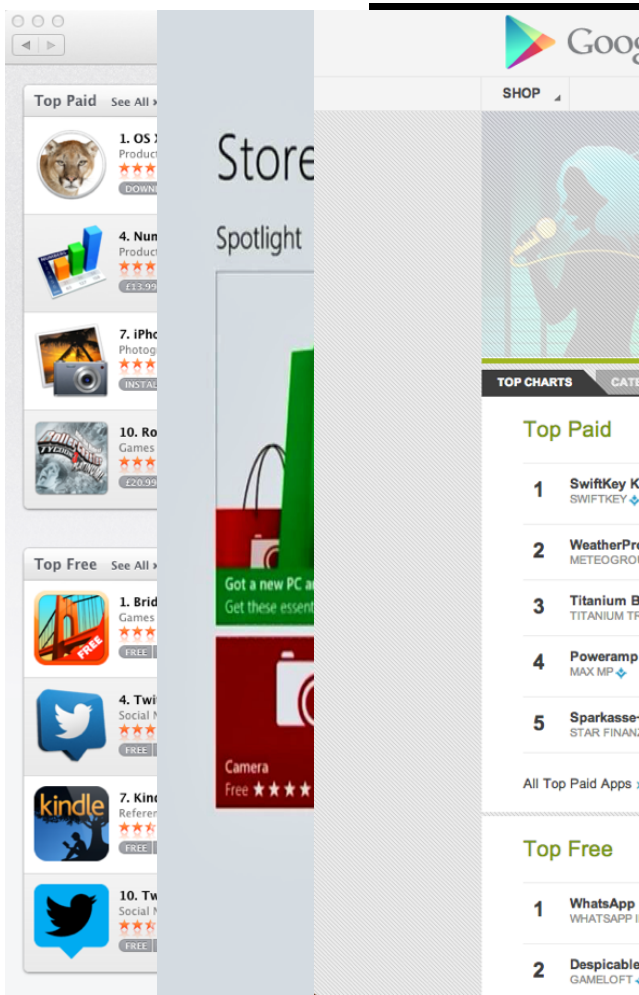
All Categories

- Business
- Developer Tools
- Education
- Entertainment
- Finance
- Games
- Graphics & Design
- Health & Fitness
- Lifestyle
- Medical
- Music
- News
- Photography
- Productivity
- Reference
- Social Networking
- Sports
- Travel
- Utilities
- Video
- Weather

Many distribution platforms



Many distribution platforms



STEAM™

**Why is Python a
valid candidate ?**



Python fulfilling 90's Promise

- Interpreter identically running on the main
platforms

Win 32, Windows 8, Mac OSX and Linux

Develop once run everywhere

Hmm reminds me of something !

Can access OS functions

- Support for Posix API on all systems
- Filesystem API is the C one: simplest abstraction to a file system
 - os module for operations on files and dirs
 - os.path to do path resolution
- System Environment variables supported
 - important for easily configuring your app
 - os.getenv("HOME")

Posix Included

- Support for Processes

- fork, execv, spawn

Support for IPC

- Pipes, shared memory

- Support for Threads

- ok to run a GUI loop and associated treatment in parallel

But not always sufficient !

- Underlying file systems differ and Windows Filesystem is ... troublesome
- Stupidly slow when it comes to read directory contents
- On Linux: 2 sec to list 250K emails over 50 Dirs while more than 30 sec on Win
 - Gmvault has a lazy read function and caching strategy for the emails

Extend it if needed

- Can access the C/C++ libs on Win and Lin
 - call up DLLs and C libs
- ctypes is excellent for prototyping
- Can access objC libs with pyobjc
- Means that you will not be cross-platform

What is missing ?



Graphical Interfaces



- Cross platform
- Native UI
- Powerful (multiple widgets)
- lively community around these frameworks

But ...

The screenshot shows a code comparison tool window titled "file-merge-1.txt # file-merge-0.txt # file-merge-2.txt - Ellié Computing - Comparaison, fusion et édition". The window displays three files side-by-side for comparison:

- File 1 (Left):** `/Users/Armel/dev2.5.x/`. Contains code with annotations: "added a conflicting line here at left" (line 13), "added some lines here at left" (lines 16-19), and "changed at left" (line 24).
- File 2 (Middle):** `/Users/Armel/dev2.5.x/`. Contains code with annotations: "added a conflicting line here at right" (line 12) and "added a line here at right !" (line 19).
- File 3 (Right):** `/Users/Armel/dev2.5.x/file`. Contains code with annotations: "added a conflicting line here at right" (line 12) and "fusion sans titre" (line 19).

At the bottom, a "Résultat de la fusion" (Merge Result) window shows the merged code with a red line indicating a conflict between lines 8 and 9:

```
8 test_merge_base(DST("filemerge0.txt"), DST("filemerge01.txt"), DST("filemerge02.txt"), DST("withconflict.txt"));
9 test_merge_base(DST("filemerge0.txt"), DST("filemerge01.txt"), DST("filemerge02b.txt"), DST("filemerged012b.txt"));
10 }
11
12 added some lines here at left
13 added some lines here at left
14 added some lines here at left
15 added some lines here at left
16
17 void test_textfile_loading()
18 {
19 test_one_text_file(DST("utf8.txt"));
20 test_one_text_file(DST("utf16le.txt"));
21 test_one_text_file(DST("utf32be.txt"));
22 test_one_text_file(DST("utf32le.txt"));
23 test_one_text_file(DST("western.txt"), ENC_WESTERN);
24 test_one_text_file(DST("western.txt"));
25 }
```

The status bar at the bottom indicates: Transaction level: 0, Unicode 8 bits (UTF-8) (auto-déte té), 0 suppressions, 3 insertions, 6 modifications, 8 conflits, Ligne 16/56, Col 2.

The Obvious



- Build UI with what you know
- Don't want to learn a new framework
- Easier to transform your App in a SaaS

Python - HTML5 Bridge



<http://www.tidesdk.org>



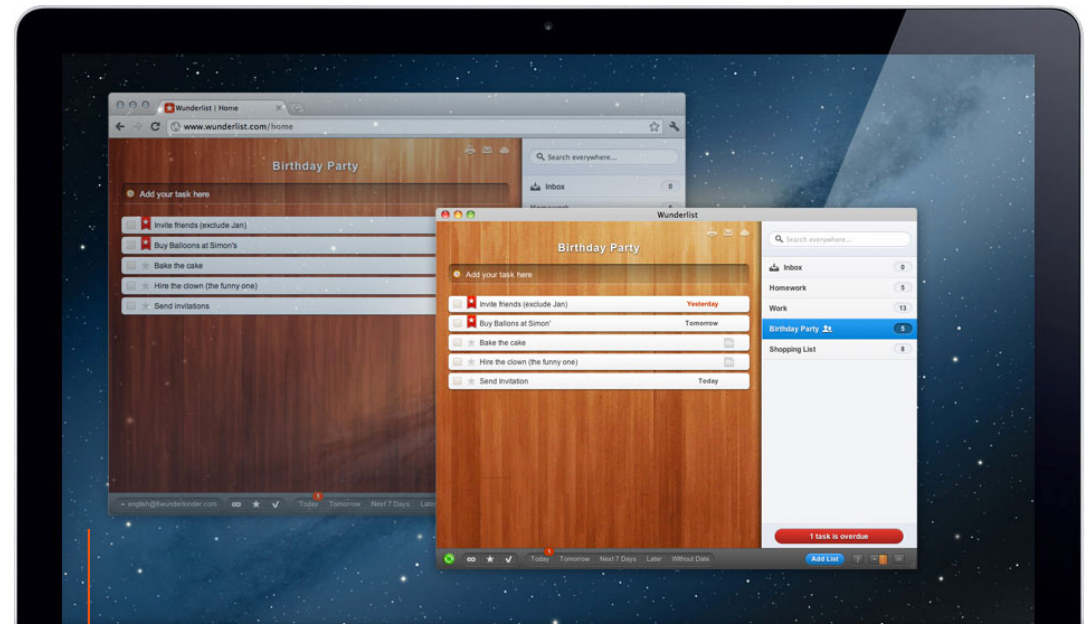
Create multi-platform desktop apps with HTML5, CSS3 and JavaScript

TideSDK is the new standard for creating beautiful and unique desktop apps using your web development skills.

Download v1.3.1 beta

Docs

Donate



Wunderlist MacOS desktop app by 6Wunderkinder created with TideSDK.

nodewebkit: My Choice



+



- use chromium for rendering
- use nodejs for the UI backend
- Python for the business part
- more DIY but more freedom

Packaging Tools

- Packaging is critical to provide an easy install
- PyPi with pip + virtualenv is fantastic
 - Why do I have to install setuptools (ez_setup.py) to install pip
- This is for Nerds and Geeks
- Can offer that kind of packaging for Linux

Packaging Tools (ctd.)

- For Windows, you need a self-contained package
- You can package python.exe in your distribution but it is tedious
- Build an executable including all Python assets (interpreter, modules)
- This is done with py2exe (<http://www.py2exe.org/>)

Packaging Tools (ctd.)

- py2exe is dying
- Not been updated since 2008
- You need to be a Google search guru to find the documentation

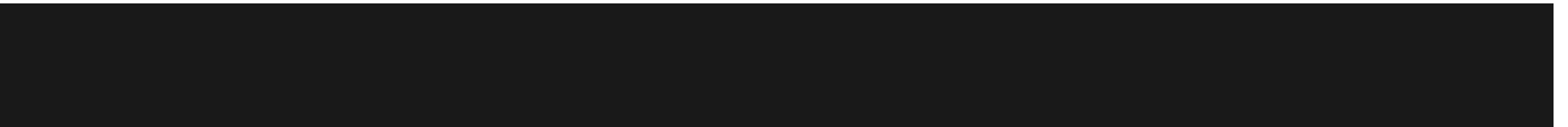
Packaging Tools

Need somebody in this room
to start working on it !!

The Python community needs you !



Open Source Dev Experience



Gmvault Gmail Backup

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Billions of emails saved with Gmvault since its creation.

Backup and restore your gmail account at will.

Featured in:

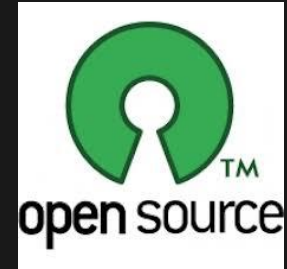


<http://www.gmvault.org>



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Open Source Now !



- Your own personal tailored training
- Your CV will shine
- Incredibly rewarding
- Unique sense of freedom and control
- Unique ideas could allow you to be financially successful



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gmail backup software <http://www.gmvault.org> — Edit

959 commits 7 branches 10 releases 8 contributors

branch: master gmvault /

Merge pull request #131 from sergevanginderachter/ignore-build

gaubert authored a month ago latest commit 23a6ae8ec9

etc	add for getting automatic stats in Google Spreadsheet	2 months ago
src	pylinting	3 months ago
.gitignore	ignore build files from setup.py	a month ago
.project	add project files	2 years ago
.pydevproject	fixing issue with muted flag	3 months ago
AUTHORS.md	add AUTHORS.md	4 months ago
CNAME	add CNAME	a year ago
GNU-AGPL-3.0	add GPLv3 licensing	a year ago
MANIFEST.in	add release note and fix Makefile	a year ago
Makefile	prepare release of 1.8	4 months ago
PKG-INFO	add argparse to have is working with python2.6	a year ago
README.md	update readme	4 months ago
RELEASE-NOTE.txt	update release note	2 months ago
THIRD-PARTY-NOTICES	add GPLv3 licensing	a year ago
setup.py	improve mod_imap	3 months ago

Code

Issues 42

Pull Requests 1

Wiki

Pulse

Graphs

Network

Settings

SSH clone URL

git@github.com:ga

You can clone with HTTPS, SSH, Subversion, and other methods.

Clone in Desktop

Download ZIP

Open Source Success Triumvira



Jenkins

Jenkins gmvault-test #96 search jenkins | log out ENABLE AUTO REFRESH

[Back to Project](#)
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[Changes](#)
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[Edit Build Information](#)
[Delete Build](#)
[Git Build Data](#)
[No Tags](#)
[Test Result](#)
[Violations](#)
[Previous Build](#)

Build #96 (Jul 3, 2013 11:27:45 AM)

Started 45 sec ago
Took [39 sec](#)
[add description](#)

Changes

- add for getting automatic stats in Google Spreadsheet ([detail](#))
- ignore build files from setup.py ([detail](#))

Started by user [jenkins](#)

Revision: 23aeae8ec982d6d0fda8dd9fcec26a25e9d5e3951

- origin/master

Test Result (2 failures / +2)

[gmvault_essential_tests.TestEssentialGMVault.test_backup_and_restore](#)
[gmvault_essential_tests.TestEssentialGMVault.test_restore_tricky_emails](#)

pylint 83

Build #	pylint count
#11	0
#12	0
#13	0
#14	1200
#15	600
#16	600
#17	600
#18	600
#19	600
#20	600
#21	600
#22	600
#23	600
#24	600
#25	600
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#95	600

[Help us localize this page](#) Page generated: Jul 3, 2013 11:28:31 AM [REST API](#) [Jenkins ver. 1.493](#)

Open Source Success Tips



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3. ▲ [An Open Letter to Craig Newmark](#) (krrb.com)
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Thank you !

Questions ?

No libs for Notification

- No cross-platform python lib for that



nodewebkit apps example

Telenet Wifi-fikser

 **Blijf je Wifi de baas!**

Wifi of draadloos internet is superhandig, maar evenaart nooit de topkwaliteit van internet via de kabel. **Om het allerbeste uit je Wifi te halen, heeft Telenet dit handige hulpmiddel ontwikkeld.** Je steekt er heel wat mee op over je Wifi en je kunt er de meest voorkomende Wifi-problemen zelf mee oplossen.

Word Wifi-slim!
Verrassende weetjes en handige tips

Los je Wifi-probleem op.
Met onze Wifi-fikser

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Homespot? Hotspot?

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