Build your static site with Python
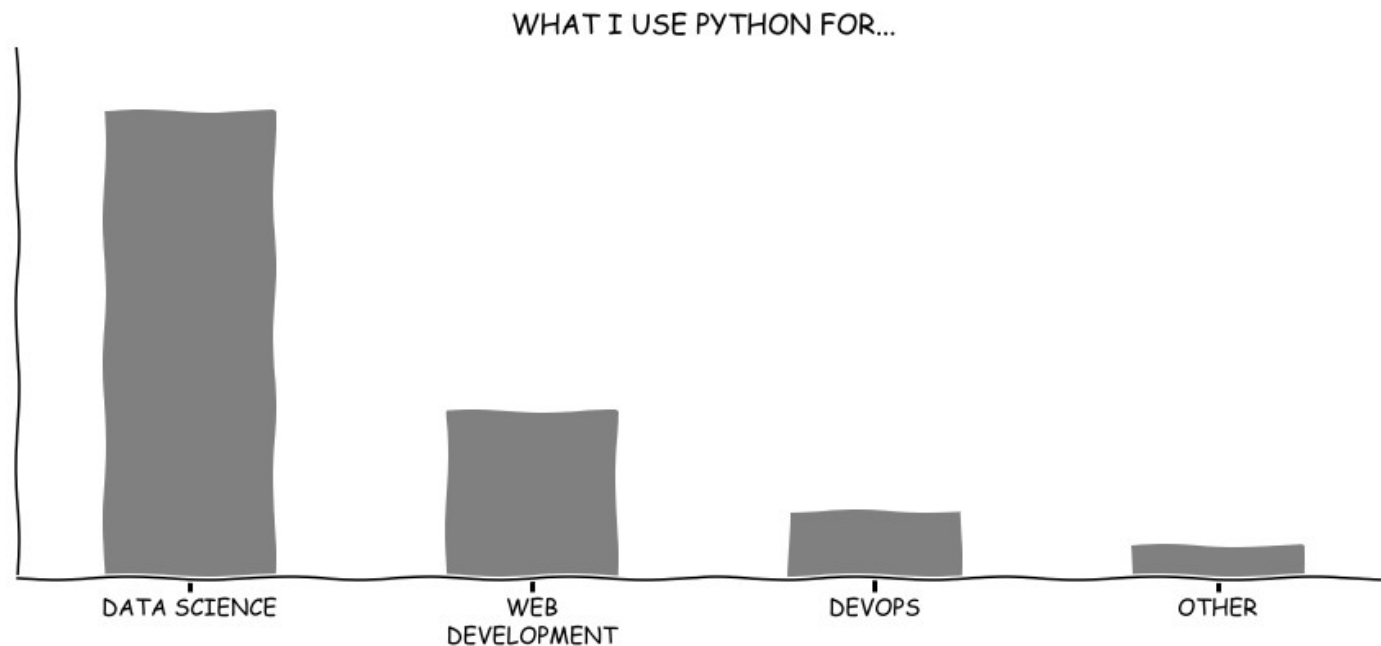
PYCONES
2018
MÁLAGA

Fernando Rabanal

October 6, 2018

Build your static site with Python

PyCon Spain – Oct 6, 2018

Disclaimer

- Opinions in this talk are my own and not of my employer.

- Any code or information from this talk is only shown for informative purposes. Use it at your own risk.

Who am I?

WHAT I USE PYTHON FOR...

DATA SCIENCE   WEB DEVELOPMENT   DEVOPS   OTHER

Data Scientist as my job

Interested in new technologies

Passion for Python

Improve by sharing

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Why?

Why build a static site?

Maintenance

- Based in Python and Markdown
- Incremental builds
- CI/CD integration

Security

- Just plain HTML
- External dependencies for dynamic content

Obsolescence

- Avoid urgent platform updates
- Technology changes are much smoother

Control

- Avoid lock-in
- Control your costs and performance
- Focus on the content

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python™ **+** M↓

| We love the language |
| Easy to use and maintain |
| Create tailored extensions |
| Pythonic philosophy |

Easy	Portable
Fast	Flexible
Clean	Fits any workflow

Why Markdown? A two minute explanation

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How?

Python-based common libraries

MkDocs

https://www.mkdocs.org/

Nikola

https://getnikola.com/

Pelican

https://blog.getpelican.com/

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MkDocs

MkDocs is a fast, simple and downright gorgeous static site generator that's geared towards building project documentation.

Documentation source files are written in Markdown, and configured with a single YAML configuration file.

https://www.mkdocs.org/

- Made to aid project documentation.

- Easy to use, easy to deploy.

- Customize the appearance.

- Live previews of your work

MkDocs: create your site

1 Initialize the project

```
> mkdocs new pycon_mkdocs
```

```
INFO    -  Creating project directory: pycon_mkdocs
INFO    -  Writing config file: pycon_mkdocs/mkdocs.yml
INFO    -  Writing initial docs: pycon_mkdocs/docs/index.md
```

2 Place **.md** files in **docs** folder

3 Create HTML output

```
> mkdocs serve
```

MkDocs: site preview

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Nikola

Nikola is a static website and blog generator. The very short explanation is that it takes some texts you wrote, and uses them to create a folder full of HTML files.

If you upload that folder to a server, you will have a rather full-featured website, done with little effort.

https://getnikola.com/

- Support for automation.

- Themes and extensions available.

- Internacionalization support

- Support for blogs, static pages… a replacement for CMS

Nikola: create your site (I)

```
> nikola init --demo pycon_nikola
```

```
Creating Nikola Site
====================

This is Nikola v7.8.15.  We will now ask you a few easy questions about your new site.
If you do not want to answer and want to go with the defaults instead, simply restart with the `-q` parameter.
--- Questions about the site ---
[Site title [My Nikola Site]: Python Hints
[Site author [Nikola Tesla]: pyconist
[Site author's e-mail [n.tesla@example.com]: me@example.com
[Site description [This is a demo site for Nikola.]: This is a brand new place for your Python tricks.
[Site URL [https://example.com/]: https://
[Enable pretty URLs (/page/ instead of /page.html) that don't need web server configuration? [Y/n] Y
--- Questions about languages and locales ---
We will now ask you to provide the list of languages you want to use.
Please list all the desired languages, comma-separated, using ISO 639-1 codes.  The first language will be used as the default.
Type '?' (a question mark, sans quotes) to list available languages.
[Language(s) to use [en]:

Please choose the correct time zone for your blog. Nikola uses the tz database.
You can find your time zone here:
https://en.wikipedia.org/wiki/List_of_tz_database_time_zones

[Time zone [Europe/Madrid]:
    Current time in Europe/Madrid: 18:07:01
[Use this time zone? [Y/n]
--- Questions about comments ---
You can configure comments now.  Type '?' (a question mark, sans quotes) to list available comment systems.  If you do not want any comments, just leave the field blank.
[Comment system: ?

# Available comment systems:
#   disqus, facebook, googleplus, intensedebate, isso, livefyre, muut

[Comment system:

That's it, Nikola is now configured.  Make sure to edit conf.py to your liking.
If you are looking for themes and addons, check out https://themes.getnikola.com/ and https://plugins.getnikola.com/.
Have fun!
[2018-09-08T16:07:22Z] INFO: init: A new site with example data has been created at pycon_nikola.
[2018-09-08T16:07:22Z] INFO: init: See README.txt in that folder for more information.
```

Nikola: create your site (II)

2   Place your files

        Posts in **posts** folder

        Static pages in **pages** folder

3   Create HTML output

```
> nikola build
```

4   Visualize in **127.0.0.1:8000**

```
> nikola serve
```

Nikola: site preview

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Pelican

I was previously using WordPress, a solution you can host on a web server to manage your blog. Most of the time, I prefer using markup languages such as Markdown or reStructuredText to type my articles.

Some history about Pelican

- Customizable, extensible.

- Many themes available in GitHub.

- Internacionalization support.

- Focus in blogs, with support for integration with other tools: WordPress, social networks...

```
Welcome to pelican-quickstart v3.7.1.                    1      > pelican-quickstart

This script will help you create a new Pelican-based website.

Please answer the following questions so this script can generate the files
needed by Pelican.


> Where do you want to create your new web site? [.] ./pycon_pelican
> What will be the title of this web site? Python Hints
> Who will be the author of this web site? pyconist
> What will be the default language of this web site? [es] en
> Do you want to specify a URL prefix? e.g., http://example.com    (Y/n) Y
> What is your URL prefix? (see above example; no trailing slash) https://
> Do you want to enable article pagination? (Y/n) Y
> How many articles per page do you want? [10]
> What is your time zone? [Europe/Paris]
> Do you want to generate a Fabfile/Makefile to automate generation and publishing? (Y/n) Y
> Do you want an auto-reload & simpleHTTP script to assist with theme and site development? (Y/n) Y
> Do you want to upload your website using FTP? (y/N) N
> Do you want to upload your website using SSH? (y/N) N
> Do you want to upload your website using Dropbox? (y/N) N
> Do you want to upload your website using S3? (y/N) N
> Do you want to upload your website using Rackspace Cloud Files? (y/N) N
> Do you want to upload your website using GitHub Pages? (y/N) N
Done. Your new project is available at /Users/macbook/Documents/pycon2018/pycon_pelican
```

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Pelican: create your site (II)

2 Place your files

　　　　Posts in **content** folder

　　　　Static pages in **content/pages** folder

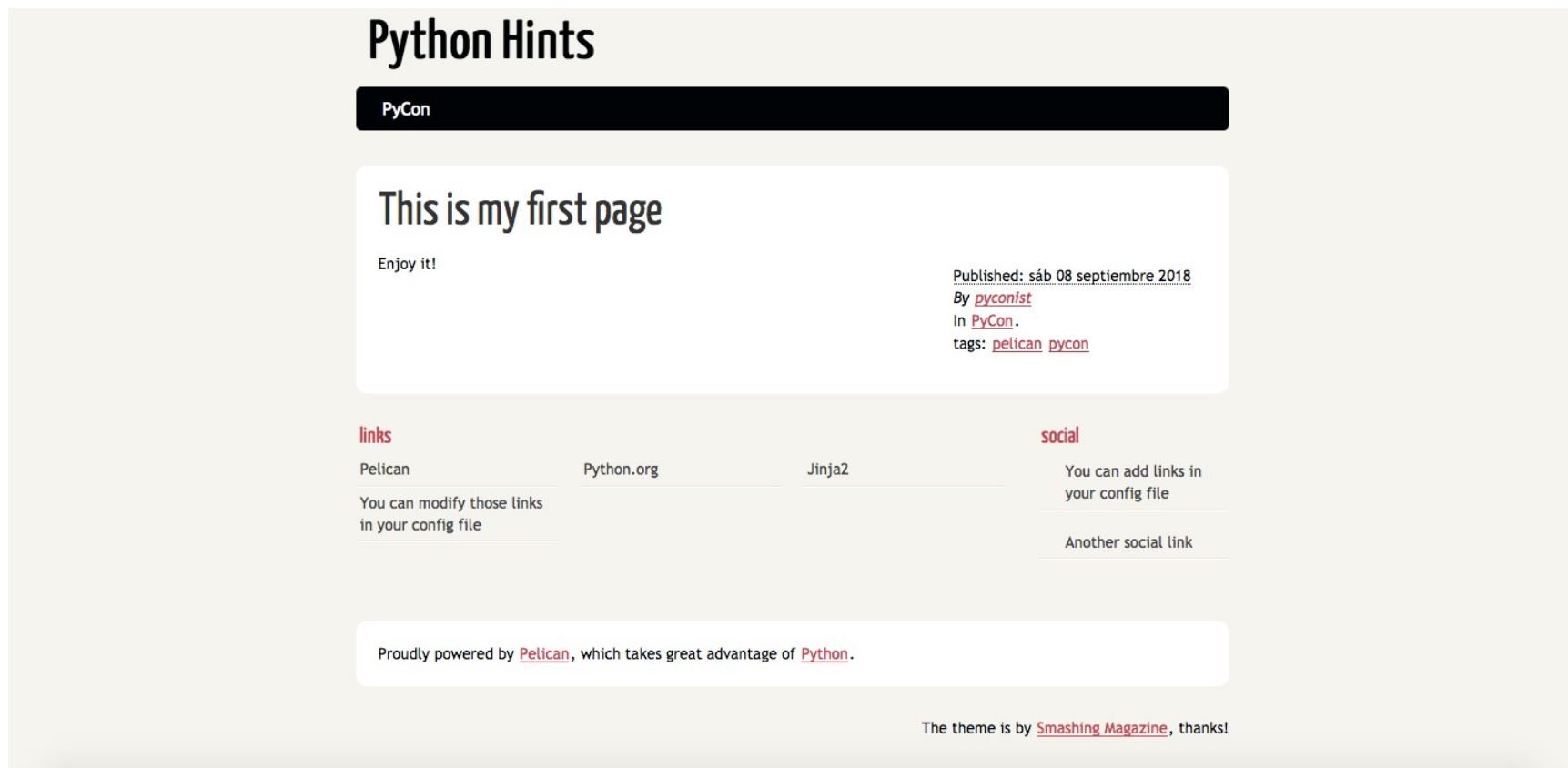**3** Create HTML output

```
> pelican content
```

4 Visualize in **127.0.0.1:8000**

```
> cd output
> python -m pelican.server
```

Pelican: site preview

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How can I deploy my site?

MkDocs

- Host your HTML files anywhere: your server, GitHub pages, Amazon S3...

Nikola

- Support for:
  - Automated deployment
  - GitHub
  - Integration with Travis CI

Pelican

- Support for:
  - FTP transfer
  - SSH transfer
  - Dropbox
  - S3
  - Rackspace Cloud Files
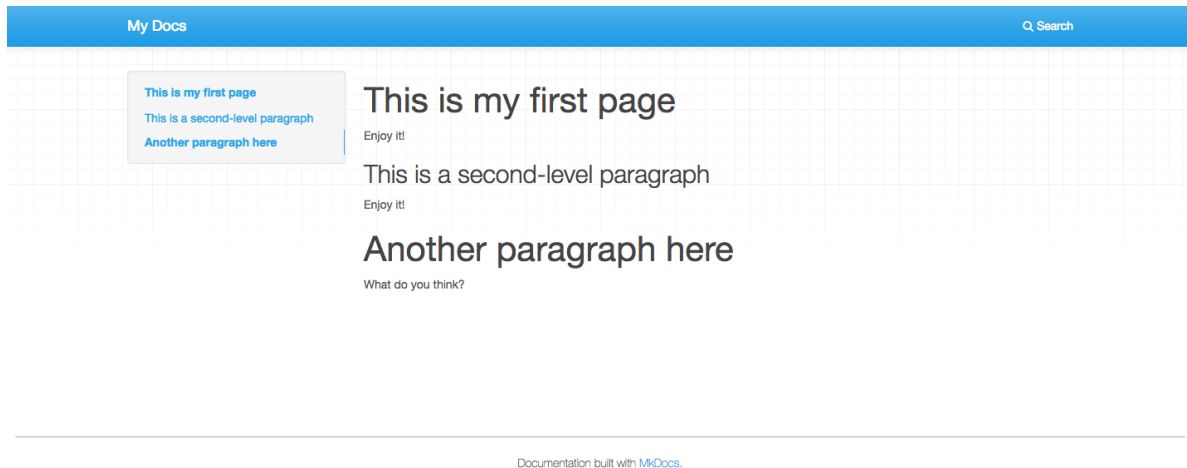 - GitHub

What?

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```
1  # This is my first page
2
3  Enjoy it!
4
5  ## This is a second-level paragraph
6
7  Enjoy it!
8
9  # Another paragraph here
10
11 What do you think?
12
```

My Docs   Q Search

This is my first page
This is a second-level paragraph
Another paragraph here

This is my first page
Enjoy it!

This is a second-level paragraph
Enjoy it!

Another paragraph here
What do you think?

Documentation built with MkDocs.

Focus on the content   Iterate quickly   Maintain with little effort   Simple and secure

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Customize your experience

MkDocs

- Plain and simple.
- Forget about any complexity.
- Create, visualize, deploy.

Nikola

- Additional themes available.
- Not tailored only for blogs.
- Extend your web as you desire.
- Incremental builds.
- CI/CD integration

Pelican

- Themes and extensions available.
- Deploy almost everywhere automatically.
- Great option for blogs, many options available.
- Incremental builds.
- CI/CD integration.

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Do not stop at static only!

MkDocs

- Embed code from external sources.
  - HTML blocks.

Nikola

- Integrated support:
  - Media
  - Youtube
  - Vimeo
  - Soundcloud
  - Code blocks
  - Gist
  - Thumbnail
  - Charts…

Pelican

- Integrated support:
  - Disqus
  - Twitter
  - Google Analytics…

… and many other via plugins!

Thank you for your attention!

https://github.com/frabanalpresa/pycon_es18

Any questions?

Acknowledgements and links

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https://www.python.org/

https://www.mkdocs.org/

https://getnikola.com

https://blog.getpelican.com/

https://daringfireball.net/projects/markdown/

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