

# Advanced Web Technologies

Geoffray Bonnin

# Web frameworks

- What is a web framework?
  - Set of tools to make the development of web applications easier
  - Requires some learning time before being actually helpful
- Some examples of web frameworks





django

# What is Django?

- Open source Python web framework
- Active and experimented community
  - Thorough documentation: <https://docs.djangoproject.com/>
  - Various snippets: <https://djangosnippets.org/>
  - Various packages: <https://djangopackages.org/>
- Supports the “MTV” pattern (a variant of MVC)
  - Means “Model – Template – View”
  - Each web application is placed in a “project”
  - A project is a set of files and folders, organized according to the MTV pattern
- Requires to know the basics of Python – many good interactive courses:
  - <https://www.datacamp.com/onboarding/learn?technology=python>
  - <https://www.codecademy.com/courses/learn-python/>
  - <https://www.learnpython.org>

# History of Django

- Created by Adrian Holovaty, Simon Willison and Jacob Kaplan-Moss



- 2003: production and maintenance of web sites for a newspaper
  - They had an intensely fast schedule
  - So they developed a time-saving framework
- 2005
  - They released the framework
  - They named it “django” (after the guitarist Django Reinhardt)
- Nowadays
  - Well established open source project
  - Hundreds of contributors

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The Web framework for perfectionists with deadlines. <https://www.djangoproject.com/>

[python](#)[django](#)[web](#)[framework](#)[orm](#)[templates](#)[models](#)[views](#)[apps](#)[25,029](#) commits[44](#) branches[170](#) releases[1,475](#) contributorsBranch: [master](#)[New pull request](#)[Find file](#)[Clone or download](#)

timgraham Fixed #28708 -- Added constants to detect the Python version.

Latest commit 941b0a5 a day ago

[.tx](#)

Removed contrib-messages entry in Transifex config file

a year ago

[django](#)

Fixed #28708 -- Added constants to detect the Python version.

44 minutes ago

[docs](#)

Refs #28248 -- Clarified the precision of PASSWORD\_RESET\_TIMEOUT\_DAYS.

20 hours ago

[extras](#)

Refs #23919 -- Removed Python 2 reference in django\_bash\_completion.

3 months ago

[js\\_tests](#)

Fixed #28688 -- Made admin's URLify.js skip removal of English words ...

23 hours ago

[scripts](#)

Refs #23968 -- Removed unnecessary lists, generators, and tuple calls.

4 months ago

[tests](#)

Fixed #28708 -- Added constants to detect the Python version.

44 minutes ago

[.editorconfig](#)

Added Python max\_line\_length to .editorconfig.

a year ago

[.eslintignore](#)

Refs #16501, #26474 -- Added xregexp.js source file.

a year ago

[.eslintrc](#)

Fixed #25165 -- Removed inline JavaScript from the admin.

2 years ago

[.gitattributes](#)

Fixed #19670 -- Applied CachedFilesMixin patterns to specific extensions

2 years ago

[.gitignore](#)

Fixed #22446 -- Added tox.ini to automate pull request checks.

a year ago

[.hgignore](#)

Synced .hgignore with .gitignore

2 years ago

[AUTHORS](#)

Fixed #28576 -- Added color interpretation method to GDALBand.

22 days ago

[CONTRIBUTING.rst](#)

Added link to the code of conduct from contributing guides.

3 years ago

[Gruntfile.js](#)

Fixed qunit tests (coverage still missing). (#7716)

10 months ago

[INSTALL](#)

Fixed #27857 -- Dropped support for Python 3.4.

18 days ago

[LICENSE](#)

Whitespace cleanup.

4 years ago

[LICENSE.python](#)

Updated Python license for 2017.

11 days ago

[MANIFEST.in](#)

Simplified MANIFEST.in

2 years ago

[README.rst](#)

Refs #17453 -- Fixed broken link to #django IRC logs.

3 months ago

[package.json](#)

Fixed qunit tests (coverage still missing). (#7716)

10 months ago

[setup.cfg](#)

Refs #23919 -- Removed misc Python 2/3 references.

9 months ago



laravel / laravel

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11,706

Code

Pull requests 0

Projects 0

Insights

A PHP Framework For Web Artisans <https://laravel.com>

php

framework

laravel

5,484 commits

8 branches

78 releases

418 contributors

Branch: master

New pull request

Find file

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taylorotwell Merge pull request #4458 from gabriel-caruso/mockery

Latest commit 8f99719 19 hours ago

app	remove things that aren't usually customized	3 months ago
bootstrap	Remove extra autoload file	6 months ago
config	Load config.session.lifetime from env file	13 days ago
database	simplify factory	5 months ago
public	compile assets	8 days ago
resources	Update example component to follow the vue.js style guide	8 days ago
routes	Move broadcast channel registration to a routes file.	10 months ago
storage	ignore testing dir	8 months ago
tests	update example unit test to use RefreshDatabase trait	2 months ago
.env.example	Load config.session.lifetime from env file	13 days ago
.gitattributes	Ignore changelog in export	7 months ago
.gitignore	Ignore the Yarn error log	4 months ago
CHANGELOG.md	tag v5.5.0 changelog	a month ago
artisan	fix conflicts	5 months ago
composer.json	Matche mockery/mockery with laravel/framework	20 hours ago
package.json	Change indent for package.json from 2 to 4 spaces	2 months ago
phpunit.xml	Merge branch 'master' into develop	3 months ago
readme.md	sponsor	29 days ago
server.php	Update server.php email address	a year ago
webpack.mix.js	Update webpack.mix.js	5 months ago

readme.md



[angular](#) / [angular.js](#)

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[Code](#)

Issues 544

Pull requests 162

Projects 0

Wiki

Insights

AngularJS - HTML enhanced for web apps! <https://angularjs.org>

8,605 commits

17 branches

190 releases

1,603 contributors

MIT

Branch: master ▾

[New pull request](#)[Find file](#)[Clone or download ▾](#)

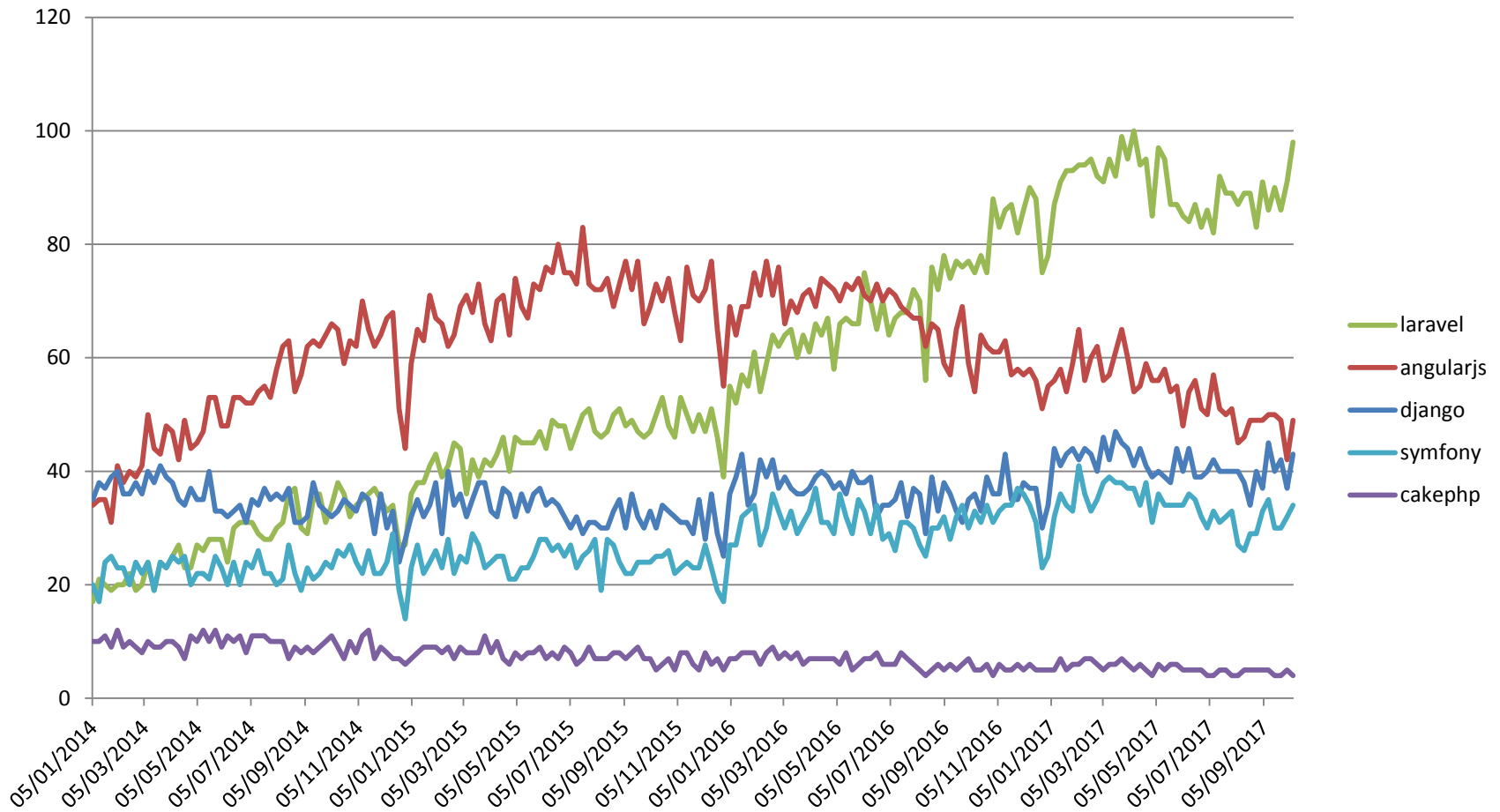
Narretz chore(node): update karma-sauce-launcher ...

Latest commit bf758d0 23 hours ago

.github	docs(*): change Angular to AngularJS	2 months ago
benchmarks	chore(benchmarks): add \$watchCollection tests	4 months ago
css	style(css) separate selectors and declarations by new lines	3 months ago
docs	docs(*): add / correct `@`-tags; fix headlines; add info	6 days ago
i18n	chore(i18n): update CLDR to v30.0.1	4 months ago
images	docs(*): optimize images	26 days ago
lib	chore(browserstack): Update browserstacktunnel-wrapper, fix options	6 months ago
logs	creating logs/ and tmp/ dirs	7 years ago
scripts	chore(docs.angularjs.org): fix docs deploy for source file changes	2 months ago
src	docs(select.SelectController): fix example	4 days ago
test	fix(input): listen on "change" instead of "click" for radio/checkbox ...	4 days ago
.editorconfig	chore(editorconfig): remove settings for ngLocale after change to sc...	3 years ago
.eslintignore	chore(*): remove unused docs/bower_components mentions	7 months ago
.eslintrc-base.json	chore(eslint): enable `quotes: ["error", "single"]`	a year ago
.eslintrc-browser.json	chore(*): switch from JSHint/JSCS to ESLint	a year ago
.eslintrc-node.json	chore(*): switch from JSHint/JSCS to ESLint	a year ago
.eslintrc-todo.json	chore(eslint): enable `quotes: ["error", "single"]`	a year ago
.eslintrc.json	chore(*): switch from JSHint/JSCS to ESLint	a year ago
.firebaseerc	chore(*): deploy (docs[code] .angularjs.org to Firebase via Travis	3 months ago
.gitattributes	chore(*): add .gitattributes with new lines configuration	3 years ago
.gitignore	chore(*): deploy (docs[code] .angularjs.org to Firebase via Travis	3 months ago
.mailmap	chore(*): add a Git .mailmap with my new name	13 days ago
.npmrc	chore(dependencies): USE YARN (and node 6)	11 months ago
.travis.yml	chore(docs.angularjs.org): fix docs deploy for source file changes	2 months ago



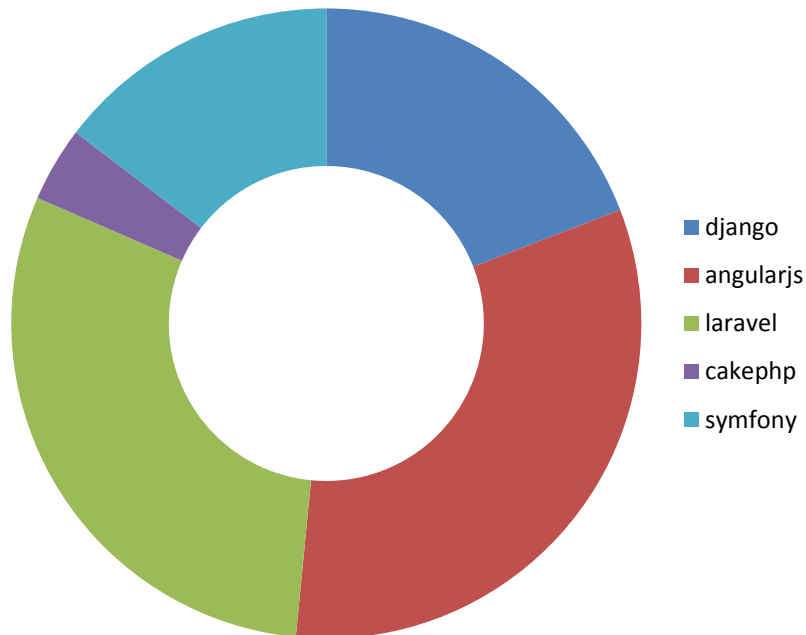
# Evolution of interests in Web frameworks



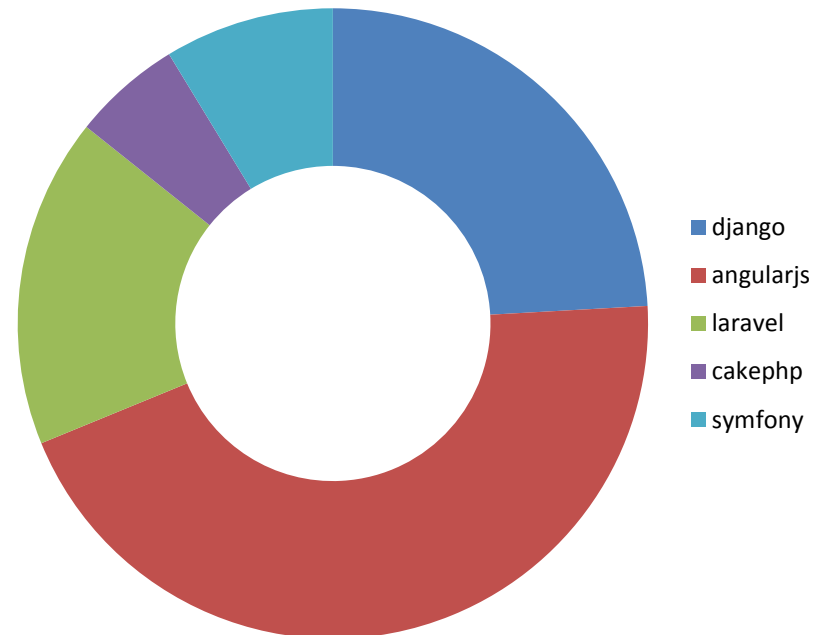
Source : Google Trends, category "Software"

# Current popularity of Web frameworks

**Cumulated number of times each framework was searched on Google**

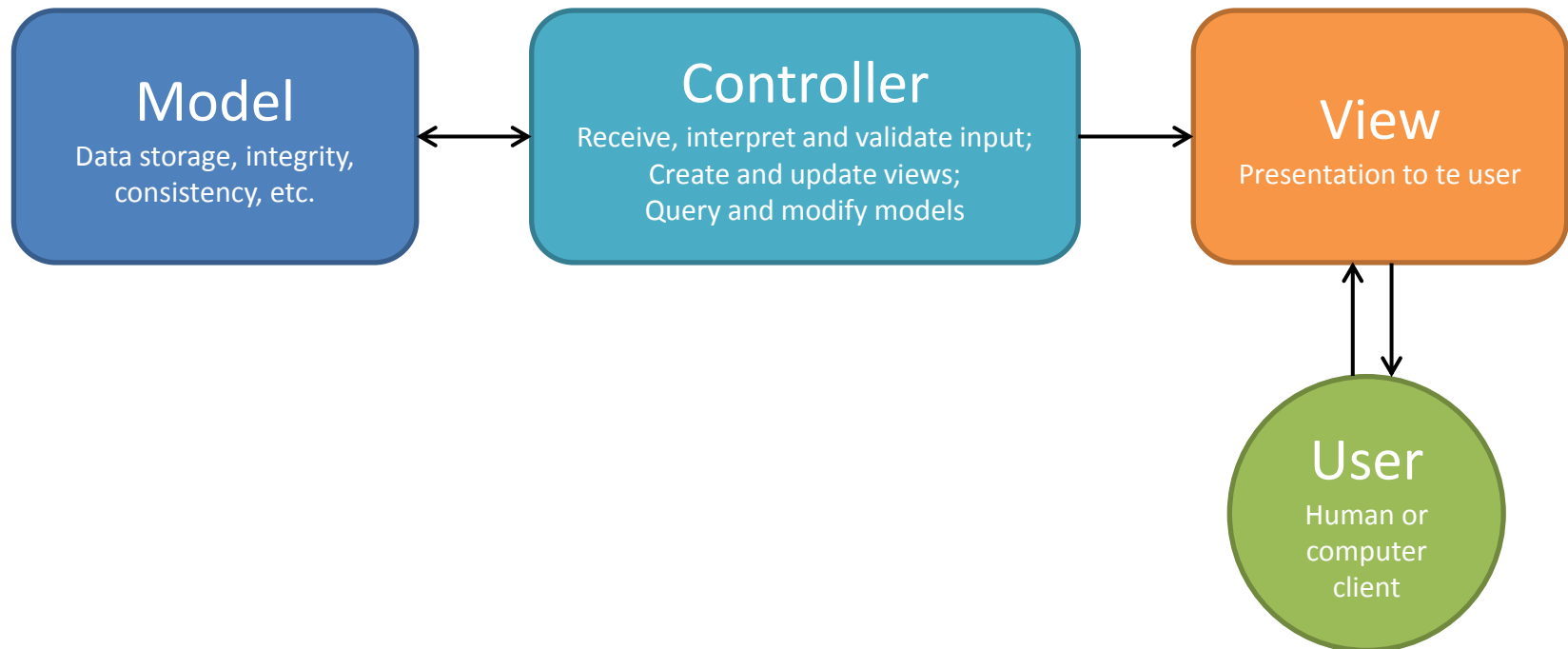


**Number of returned results on Stack Overflow**

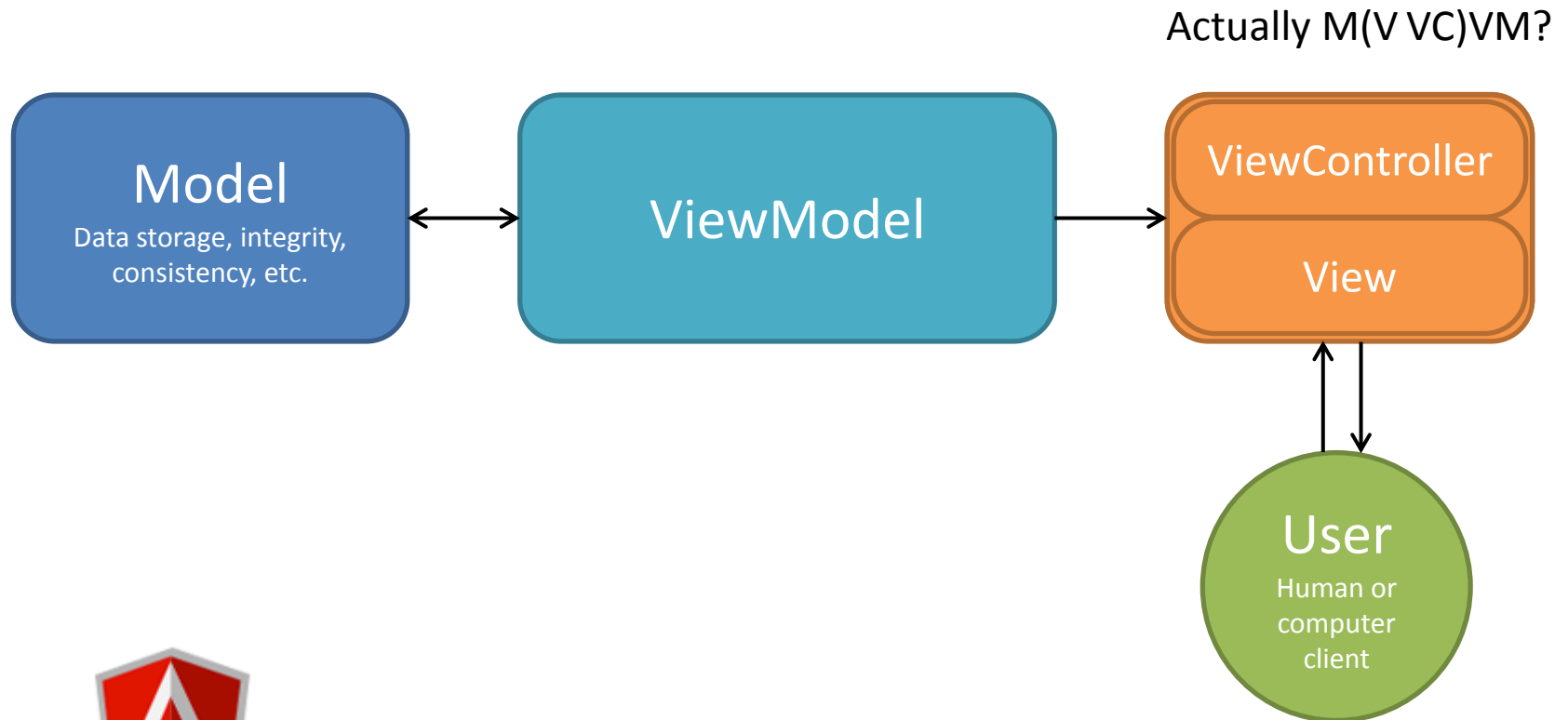


# **MODEL-VIEW-CONTROLLER AND MODEL-TEMPLATE-VIEW**

# Standard **M**odel-**V**iew-**C**ontroller pattern

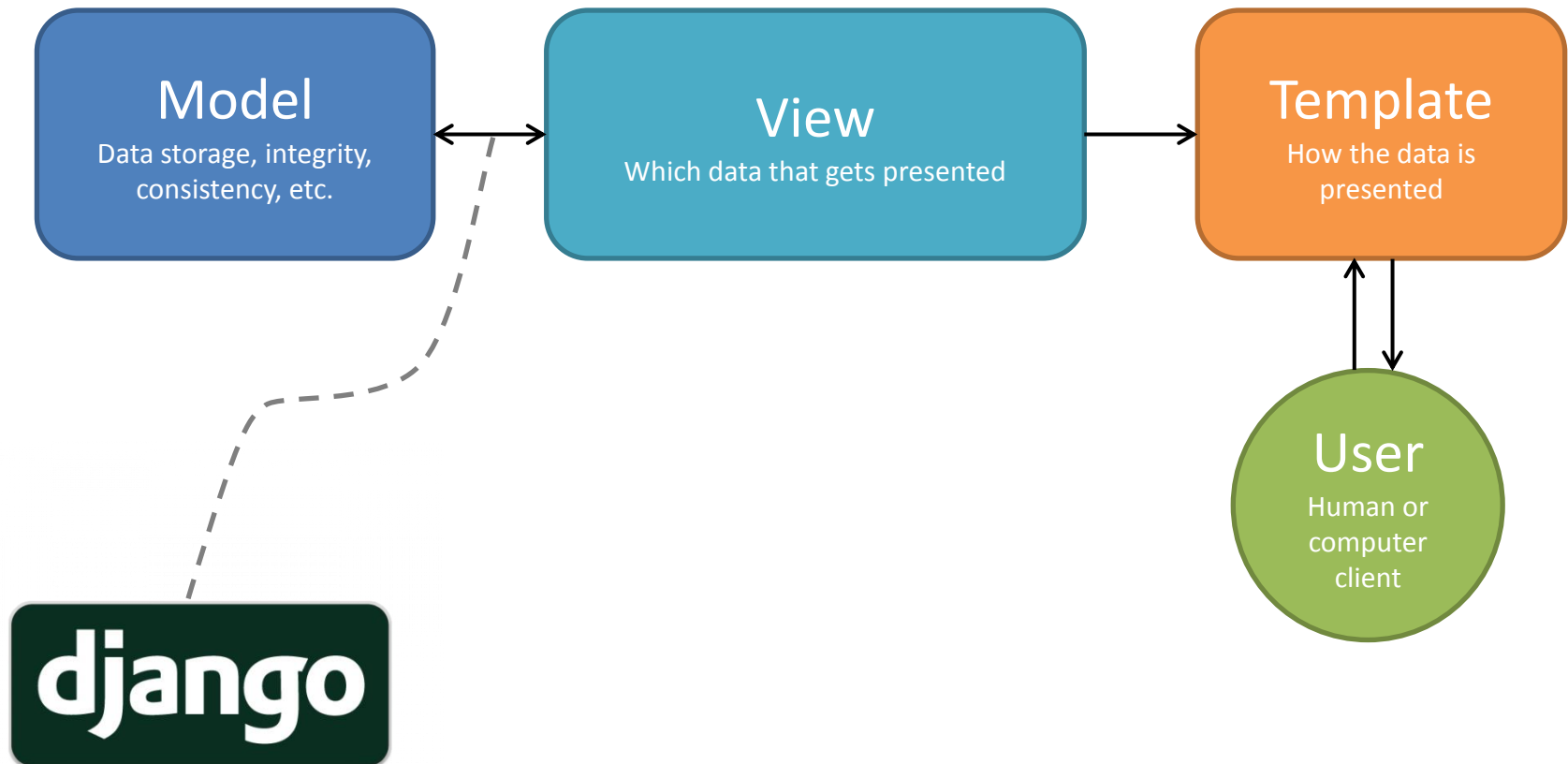


# Model View ViewModel



ANGULARJS

# Model-Template-View



**GETTING STARTED**



# Install Python

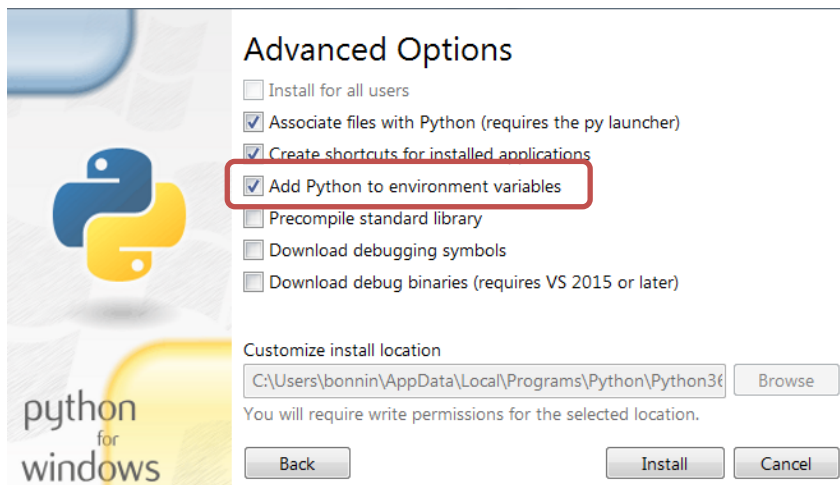
- Ubuntu

```
$ sudo apt-get update
```

```
$ sudo apt-get install python3.6
```

- Windows

- Download the installer here: <https://www.python.org/downloads/>
- Click “next”, “next”, “next”...



# Install Django

- Install pip

- Windows:

Check the “pip” box during the installation of Python

- Ubuntu :

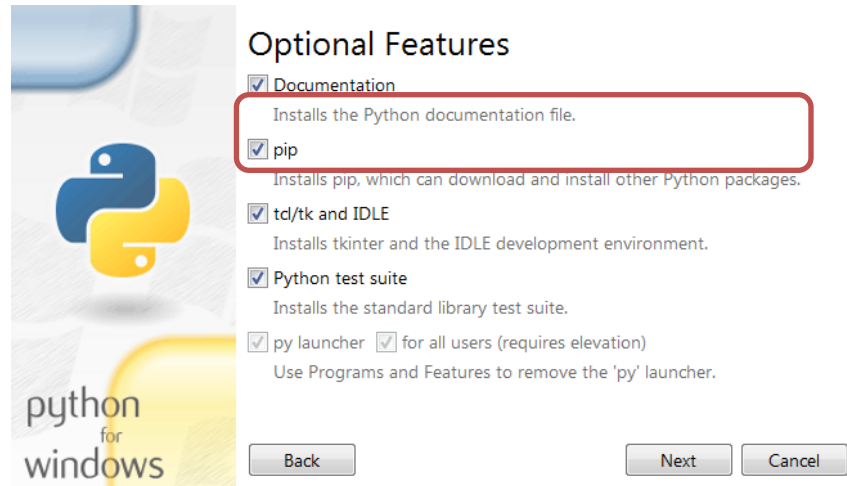
Download pip here: <https://bootstrap.pypa.io/get-pip.py>

Then run the following command:

```
$ python get-pip.py
```

- Use pip to install Django:

```
$ pip install django
```



# Create a project

- In command line, go to the desired directory
- Run the following command:  
`$ django-admin startproject lala`
- Result:

```
lala/  
  manage.py  
  mysite/  
    __init__.py  
    settings.py  
    urls.py  
    wsgi.py
```

# Run the development server

- Go to the project root directory
- Run the following command:  

```
$ python manage.py runserver
```

```
Volume in drive C has no label.
Volume Serial Number is F892-61DB

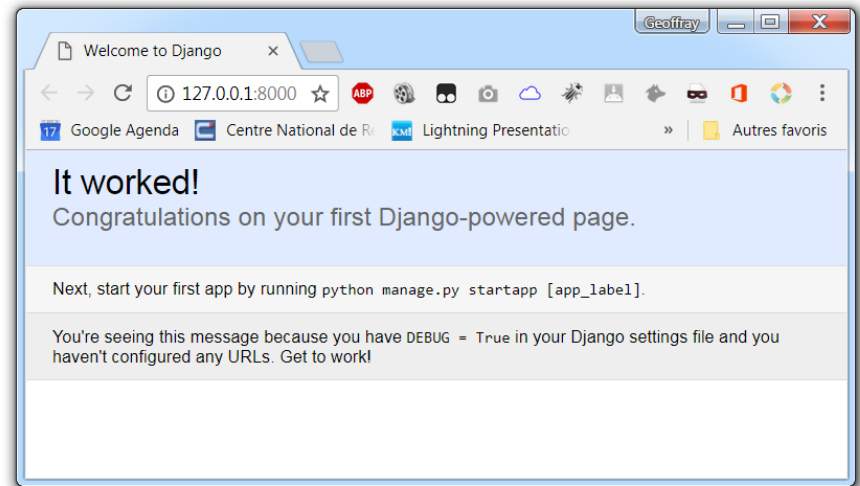
Directory of C:\Users\bonnin\django\lala

18/10/2017  03:39 PM  <DIR>          .
18/10/2017  03:39 PM  <DIR>          ..
18/10/2017  03:39 PM  <DIR>          lala
18/10/2017  03:39 PM                824 manage.py
                1 File(s)            824 bytes
                3 Dir(s)  216,873,897,984 bytes free

C:\Users\bonnin\django\lala>python manage.py runserver
Performing system checks...

System check identified no issues (0 silenced).

You have 13 unapplied migration(s). Your project may not work properly until you
apply the migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
October 18, 2017 - 15:41:51
Django version 1.11.6, using settings 'lala.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```



# Some links

1. Install Python:

<https://www.python.org/downloads/>

2. Install Django:

<https://docs.djangoproject.com/en/1.11/topics/install/#installing-official-release>

3. Create a project:

<https://docs.djangoproject.com/en/1.11/intro/tutorial01/#creating-a-project>

4. Run the development server:

<https://docs.djangoproject.com/en/1.11/intro/tutorial01/#the-development-server>