

如何用Django在24小時 作出prototype微創業 以petneed.me為例

jslee 2013 at PyConTW

who am i?

- 不太會寫js的jslee
- 目前正在創立YouHack team
- 曾經任職過的公司有台達電子雲端技術中心，D-Link、中華電信、Yam、Yahoo! 以及飛行網(Kuro P2P download)

私人時間

- 畢業於實踐大學資管系，在學時與室友創立實踐大學晨曦之星BBS
bbs.kh.usc.edu.tw。
- 在2006年創立youfate.com，並靠Google Adsense取得遊學紐西蘭的資金。
- 在2012年的過年假期，創立petneed.me。

契機

- 在過年假期吃完年夜飯，大家在守歲的時候
- 看到台北市政府開放資料平台
- 裡面有一個「開放認養動物」的json API

長這樣

ent": "臺北市流浪貓保護協會", "Phone": "0227261079", "Email": "jingyi@so-net.net.tw", "ChildreAnlong": "", "AnimalAnlong": "可(貓)", "Bodyweight": "4-5KG", "ImageName": "http://163.29.39.183/uploads/images/medium/3713fd33-db97-4cbf-b49a-be2c4eb8c9f7.jpg"}, {"Name": "蘭明", "Sex": "雄", "Type": "貓", "Build": "中", "Age": "成年", "Variety": "米克斯", "Reason": "", "AcceptNum": "101072605", "ChipNum": "", "IsSterilization": "已絕育", "HairType": "虎斑", "Note": "個性淡定、適應環境快速、對人對貓都很和善的好好先生-蘭明\n\n因為很親人很乖巧，因此從收容所接出後留在協會送養，適應各種環境都很快，跟其他貓咪相處也都很溫和，對人除了會翻肚撒嬌，任何人抱抱摸摸也都沒問題，還會表演特技用後腳站立給你看，是個性很穩定也很能自理的貓咪，預計可以很稱職地陪看電視或當伴讀小童。"}\n\n註：認養人需年滿21歲，學生需家長同意，需能接受認養前探訪(相親)", "Resettlement": "臺北市流浪貓保護協會", "Phone": "0227261079", "Email": "jingyi@so-net.net.tw", "ChildreAnlong": "可", "AnimalAnlong": "", "Bodyweight": "5KG", "ImageName": "http://163.29.39.183/uploads/images/medium/c3c33506-3b67-4154-a3e0-c1d42fd0f4c0.jpg"}, {"Name": "Wendy", "Sex": "雄", "Type": "貓", "Build": "大", "Age": "成年", "Variety": "米克斯", "Reason": "", "AcceptNum": "101072604", "ChipNum": "", "IsSterilization": "已絕育", "HairType": "虎斑白", "Note": "手長腳長且長相俊秀的貓界男模豆-WENDY\n\n雖然身材比起同年齡貓咪都還要大隻，但個性卻很膽小害羞，容易因為人的大動作而緊張害怕，但自己一個人或是跟其他貓咪一起玩的時候就很大刺刺，從小奶貓就來協會的Wendy現在是帥氣青年，正值青春好動，適合喜歡貓咪個性獨立，家裡有足夠空間讓他玩耍的認養人囉！"}\n\n預估生日：2011年2月底\n\n已絕育、已施打預防針已除蚤"}\n\n註：認養人需年滿21歲，學生需家長同意，需能接受認養前探訪(相親)", "Resettlement": "臺北市流浪貓保護協會", "Phone": "0227261079", "Email": "jingyi@so-net.net.tw", "ChildreAnlong": "", "AnimalAnlong": "", "Bodyweight": "5KG", "ImageName": "http://163.29.39.183/uploads/images/medium/4a10b64e-746c-424f-8c7a-8b2ed4f87ed3.jpg"}, {"Name": "琵琶", "Sex": "雌", "Type": "貓", "Build": "中", "Age": "成年", "Variety": "米克斯", "Reason": "", "AcceptNum": "101072603", "ChipNum": "", "IsSterilization": "已絕育", "HairType": "黃白", "Note": "眼睛又圓又亮超會放電的輕熟女-琵琶PIPPA\n\n本來是在路邊流浪由志工餵養的TNR貓咪，但因為太親人了一直重複被誘捕進動保處，所以協會接回後決定留下來送養。適應新環境時會哈氣躲人，但都是哈假的，只要給她摸下去，沒多久就會開始呼嚕兼東磨西蹭地撒嬌，需要有耐心的認養人陪伴度過適應期，就能得到一隻超ㄉㄉ的橘白美貓為伴囉！"}\n\n較喜歡女性認養人"}\n\n註：認養人需年滿21歲，學生需家長同意，需能接受認養前探訪(相親)", "Resettlement": "臺北市流浪貓保護協會", "Phone": "0227261079", "Email": "jingyi@so-net.net.tw", "ChildreAnlong": "", "AnimalAnlong": "可(貓)", "Bodyweight": "4KG", "ImageName": "http://163.29.39.183/uploads/images/medium/4ba2fe00-4b53-466a-86a1-12c5ce2a42c5.jpg"}, {"Name": "蘭心瀟", "Sex": "雌", "Type": "貓", "Build": "小", "Age": "年輕", "Variety": "米克斯", "Reason": "", "AcceptNum": "101072602", "ChipNum": "", "IsSterilization": "未絕育", "HairType": "黑白", "Note": "超喜歡表演翻肚肚給人看的乳牛女孩-蘭心瀟\n\n一開始是很緊張的怕怕貓，但經過一段時間的摸摸&抱抱訓練後，現在已經不會那麼警戒了，對所有移動的物品都想伸手撈來玩，轉換環境較易緊張，認養人須要有耐心等她適應，也需要能適時與她互動增進感情。"}\n\n適合已有養貓經驗，能處理緊張貓狀況的認養人"}\n\n註：認養人需年滿21歲，學生需家長同意，需能接受認養前探訪(相親)", "Resettlement": "臺北市流浪貓保護協會", "Phone": "0227261079", "Email": "jingyi@so-net.net.tw", "ChildreAnlong": "高中以下不建議", "AnimalAnlong": "可(貓)", "Bodyweight": "3KG", "ImageName": "http://163.29.39.183/uploads/images/medium/ac7a6af1-fd06-4ce9-8cab-ad335177d519.jpg"}, {"Name": "蘭咪", "Sex": "雄", "Type": "貓", "Build": "中", "Age": "成年", "Variety": "米克斯", "Reason": "", "AcceptNum": "101061403", "ChipNum": "", "IsSterilization": "已絕育", "HairType": "虎斑", "Note": "2009年出生的貓咪\n\n有著小手套及柔順的毛髮，個性柔順，可摸可抱，\n\n剪指甲都OK，不太會叫，\n\n活動力適中，\n\n推薦給養貓新手，適合上班族、家中有老人、小孩", "Resettlement": "臺北市流浪貓保護協會", "Phone": "0227261079", "Email": "jingyi@so-net.net.tw", "ChildreAnlong": "可", "AnimalAnlong": "", "Bodyweight": "4-5KG", "ImageName": "http://163.29.39.183/uploads/images/medium/4e48b048-f0f4-4116-bce5-a19811de1c97.jpg"}, {"Name": "優尼Uni", "Sex": "雄", "Type": "犬", "Build": "中", "Age": "年輕", "Variety": "米克斯", "Reason": "動物救援", "AcceptNum": "101041102", "ChipNum": "900128000641278", "IsSterilization": "已絕育", "HairType": "棕黑", "Note": "你好！！我叫優尼，我活潑好動也很溫馴、黏人唷！！^^", "Resettlement": "台北市動物之家 收容編號101041102", "Phone": "02-87913062", "Email": "tcapoa8@mail.taipei.gov.tw", "ChildreAnlong": "", "AnimalAnlong": "", "Bodyweight": "18KG", "ImageName": "http://163.29.39.183/uploads/images/medium/95ff0da5-14"}\n

還好在下比較宅有裝
chrome+json viewer

```













[
- {
  Name: "蘭萬鳳",
  Sex: "雌",
  Type: "貓",
  Build: "中",
  Age: "年輕",
  Variety: "米克斯",
  Reason: "",
  AcceptNum: "102032907",
  ChipNum: "",
  IsSterilization: "已絕育",
  HairType: "三花",
  Note: "永遠有"驚"的表情的萬鳳 個性好,熟了很愛摸,也會呼叫你摸牠 很愛逗貓棒,但常常抓不準,常常逗笑義工 迷你身材,圓圓臉非常討
同意,需能接受認養前探訪(大台北地區優先)",
  Resettlement: "臺北市流浪貓保護協會",
  Phone: "0227261079",
  Email: "jingyi@so-net.net.tw",
  ChildreAnlong: "可",
  AnimalAnlong: "可,貓",
  Bodyweight: "3KG",
  ImageName: "http://163.29.39.183/uploads/images/medium/45adbc74-4fef-488e-93b8-ccbacb7358cd.jpg"
},
- {
  Name: "蘭芝心",
  Sex: "雄",
  Type: "貓",
  Build: "大",
  Age: "成年",
  Variety: "米克斯",
  Reason: "",
  AcceptNum: "102032906",
  ChipNum: "",
  IsSterilization: "已絕育",
  HairType: "黃白",
  Note: "親人溫馴眯眯眼白指套橘子男生~蘭芝心 個性很乖又溫馴 會繞著人走來走去&叫人陪他玩 身材修長 已絕育,已點除蚤藥 註:認養
Resettlement: "臺北市流浪貓保護協會"
}
]

```


Why I Start Coding?

我想要看JSON裡面的圖片

In 24hours I did

Feb 03, 2013		
	redy for prod jsleew authored 2 months ago	cdf26c91ca + Browse code →
	finish display pic and name jsleew authored 2 months ago	3c870560f4 + Browse code →
Feb 02, 2013		
	add tabula template jsleew authored 2 months ago	3bc13f247d + Browse code →
	del urls.pyc jsleew authored 2 months ago	85c5540a92 + Browse code →
	set up basic bootstrap page jsleew authored 2 months ago	74a63489fc + Browse code →
	add download animal pics as file jsleew authored 2 months ago	cc916f598c + Browse code →
	add get_animal command jsleew authored 2 months ago	6ffe311059 + Browse code →
	add animal model jsleew authored 2 months ago	086cbafbe6 + Browse code →
	add animal jsleew authored 2 months ago	47eabc9918 + Browse code →
	rm *.pyc jsleew authored 2 months ago	4c8dab4c53 + Browse code →
	add .gitignore jsleew authored 2 months ago	d9424b4baf + Browse code →
	change time zone jsleew authored 2 months ago	6809c578b9 + Browse code →

Step 0.

- Register a domain name. (10 USD)
- Get a VPS (20 USD/month)
- prepare Django development environment
- ~~寫一份完整的企劃書~~
- 從wrapbootstrap.com買份美美的 template.(7-14 USD)

Step. I

- 百善孝為先，萬惡*為首
- 先設計model準備好DB要怎麼放

設計model

- 與其說是設計，倒不如就是把json API裡面的schema直接倒到django的model裡

```
1 from django.db import models
2 import datetime
3
4 class Animal(models.Model):
5     accept_num = models.IntegerField(unique=True)
6     name = models.CharField(max_length=200)
7     sex = models.CharField(max_length=200)
8     type = models.CharField(max_length=200)
9     build = models.CharField(max_length=200)
10    age = models.CharField(max_length=200)
11    variety = models.CharField(max_length=200)
12    reason = models.CharField(max_length=200)
13    accept_num = models.CharField(max_length=200)
14    chip_num = models.CharField(max_length=200)
15    is_sterilization = models.CharField(max_length=200)
16    hair_type = models.CharField(max_length=200)
17    note = models.TextField()
18    resettlement = models.CharField(max_length=200)
19    phone = models.CharField(max_length=200)
20    email = models.EmailField()
21    childre_anlong = models.CharField(max_length=200)
22    animal_anlong = models.CharField(max_length=200)
23    bodyweight = models.CharField(max_length=200)
24    image_name = models.URLField(max_length=200)
25    image_file = models.CharField(max_length=200)
26    pub_date = models.DateTimeField(auto_now=True)
```

why Django model ?

- 換DB不用重寫code，SQLite/MySQL/PostgreSQL隨便你切換
- 開發過程隨時可以增/改/刪 DB schema，只要下syncdb就能馬上同步
- 操作DB schema像是操作物件
- ~~聽說跟Ruby on Rails很像~~

step 2.

- 需要一個crontab job每天去pull json-API then insert to model

django-admin commands

- 原本是要用django-cron套件
- 多方比較後還是用 custom django-admin command + crontab最方便

Crontab Job? django ?

custom django-admin
command

放在哪?

```
polls/  
    __init__.py  
    models.py  
    management/  
        __init__.py  
        commands/  
            __init__.py  
            _private.py  
            closepoll.py  
  
tests.py  
views.py
```

如何寫?

```
1 from django.core.management.base import BaseCommand
2 from animal.models import Animal
3 import json
4 import urllib2
5 import os
6 import Image
7
8 class Command(BaseCommand):
9     args = '<'
10    help = 'get animal data from http://data.taipei.gov.tw'
11    url = "http://163.29.39.183/GetAnimals.aspx"
12
13    def handle(self, *args, **options):
14        print self.url
15        data = urllib2.urlopen(self.url)
16        j = json.load(data)
17        for i in j:
18            print i["Name"]
19            a1 = Animal.objects.filter(accept_num=i["AcceptNum"])
20            print a1
21            if not a1:
22                url = i["ImageName"]
23                url_file = url.split("/")[-1]
24                f = urllib2.urlopen(url)
25                data = f.read()
26                with open("src/media/" + url_file, "wb") as code:
27                    code.write(data)
```

update_animal.sh

```
1 #!/bin/sh
2 DJANGO_SETTINGS_MODULE=pets.settings
3 export DJANGO_SETTINGS_MODULE
4
5 PYTHONPATH=/home/ail/Envs/pets/lib/python2.7:/home/ail/mydev/pets/pets
6 export PYTHONPATH
7
8 #/path/to/python /path/to/my_django_script
9 /home/ail/Envs/pets/bin/python /home/ail/mydev/pets/pets/manage.py get_anim
```

crontab

- `9 * * * * /home/ail/mydev/pets/cronjob/
update_animal_data.sh >/dev/null 2>&1`

縮圖

```
def thumbnail(self, file, size='104x104', x2=False):
    # defining the size
    x, y = [int(x) for x in size.split('x')]
    # defining the filename and the miniature filename
    filehead, filetail = os.path.split(file.path)
    basename, format = os.path.splitext(filetail)
    miniature = basename + '_' + size + format
    if x2:
        miniature = basename + '_' + size + '@2x' + format
    filename = file.path
    miniature_filename = os.path.join(filehead, miniature)
    filehead, filetail = os.path.split(file.url)
    miniature_url = filehead + '/' + miniature
    if os.path.exists(miniature_filename) and os.path.getmtime(filename) > os.path.g
        os.unlink(miniature_filename)
    # if the image wasn't already resized, resize it
    if not os.path.exists(miniature_filename):
        image = Image.open(filename)
        image.thumbnail([x, y], Image.ANTIALIAS)
        try:
            image.save(miniature_filename, image.format, quality=90, optimize=1)
        except:
            image.save(miniature_filename, image.format, quality=90)

    return miniature_url
```


compress js/css

- django_compressor

把

```
<script src="/static/js/jquery-1.8.2.js"></script>
<script src="/static/js/jquery.isotope.min.js"></script>
<script src="/static/js/jquery.imagesloaded.js"></script>
<script src="/static/js/bootstrap.js"></script>
<script src="/static/js/flexslider.js"></script>
<script src="/static/js/carousel.js"></script>
<script src="/static/js/jquery.cslider.js"></script>
<script src="/static/js/slider.js"></script>
<script src="/static/js/fancybox.js"></script>
<script src="/static/js/twitter.js"></script>
<script src="/static/js/jquery.placeholder.min.js"></script>
<script src="/static/js/jquery-easing-1.3.js"></script>
<script src="/static/js/layerlider.kreaturamedia.jquery.js"></script>
<script src="/static/js/excanvas.js"></script>
<script src="/static/js/jquery.flot.js"></script>
<script src="/static/js/jquery.flot.pie.min.js"></script>
<script src="/static/js/jquery.flot.stack.js"></script>
<script src="/static/js/jquery.flot.resize.min.js"></script>
<script src="/static/js/jquery.infinitemscroll.min.js"></script>
<script defer="defer" src="/static/js/modernizr.js"></script>
<script defer="defer" src="/static/js/retina.js"></script>
<script defer="defer" src="/static/js/custom.js"></script>
```

變

```
<!-- start: Java Script -->  
<!-- Placed at the end of the document so the pages load faster -->  
<script type="text/javascript" src="/static/CACHE/js/fdddbac91cle.js"></script>  
<!-- end: Java Script -->
```

that's it!

- 沒了
- 只有24小時這是極限了～

但是

petneed.me YouHack team Private

To Do	Doing	Done
user upload data	cron job for upload animal.	pull down ajax
profile SEO	memembr register	mininax pics
fb fan club	member login	auto update from taipei api
setup CDN	member system with facebook & twitter integration.	use Gunicorn as server
share to fb, twitter, plurk	Add a card...	compressor js/css (use django_compressor)
i18n		move picture to media
find your lost pet		domain petneed.me / petneedme.com
geo ip		demo show in taipei open data Event
logo design		Add a card...
Add a card...		

結論

- 太陽都下山了，有夢想就趕快做
- YouHack Team 徵人中...

謝謝

Q & A