

Python Engineer under Giant Umbrella

巨大保護傘下的 Python 碼農辛酸史

Kir Chou @ PyConTW 2018



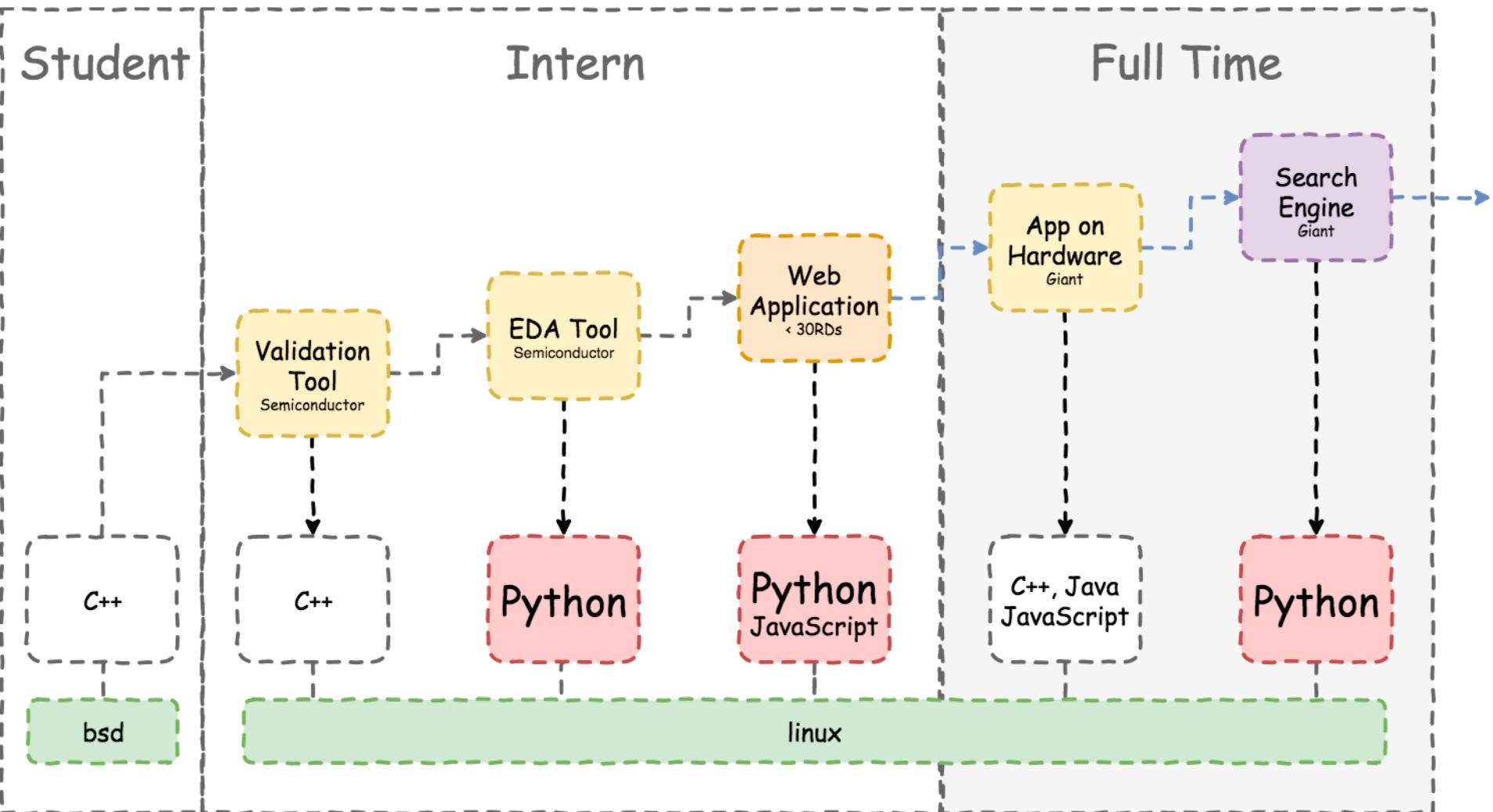
[kirchou](#)



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How to
Get into?

What are they
Doing?

3

types
of
indrustries

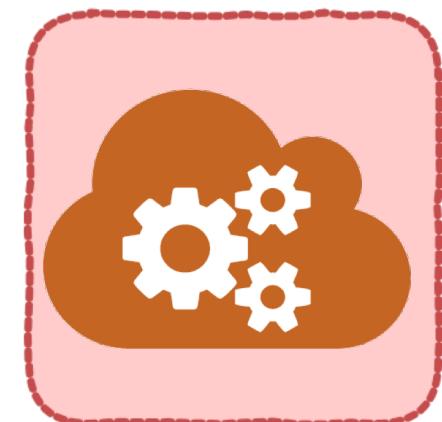
Semiconductor Industry

- IC Design House
- OEM/ODM



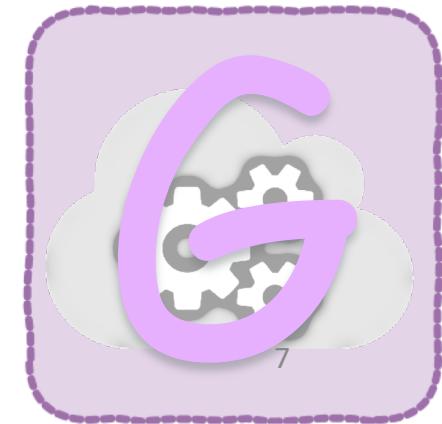
Regular Software Company

- RD < 1000
- Software



Giant Software Company

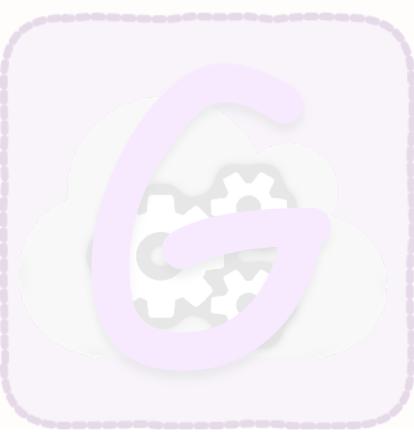
- RD > 1000
- Mixed





Why do they choose Python?

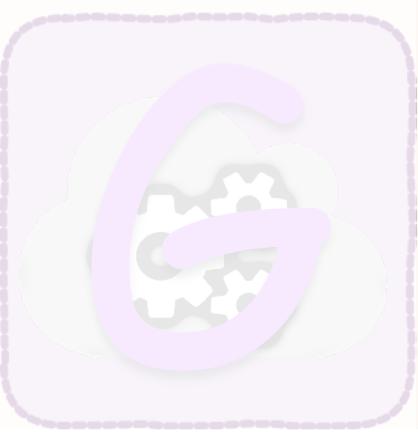
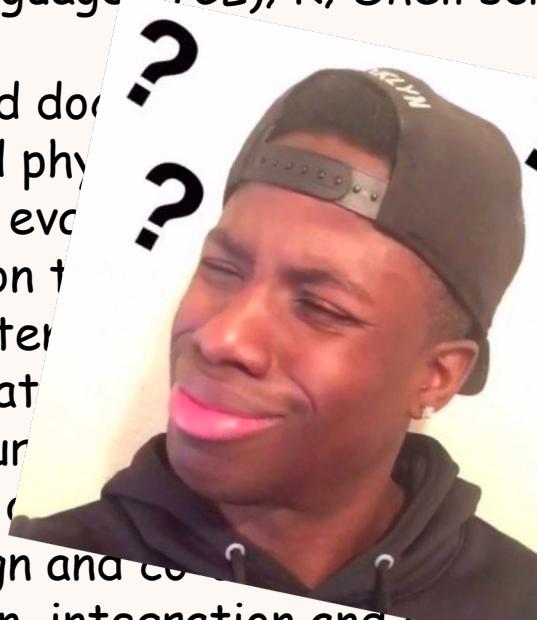
- Migrating from Perl to Python
- General Script Language
 - Validation, EDA Tool (RD)
 - Integration Test (QA)
 - Automation (DevOps)
 - Data Analysis (Data)





Job Description

Object-Oriented programming languages; JavaScript; HTML; DHTML; CSS; C; C++; SQL; Perl; Python; Tool Command Language (TCL); R; Shell script

- 
- 
1. Collect and document logical and physical information about computer-based systems;
 2. Research, evaluate and select information technologies and models to optimize performance and efficiency;
 3. Develop data architecture, reliability and security models to optimize performance and efficiency;
 4. Plan, design and coordinate the development, installation, integration and operation of computer-based systems;
 5. Assess, troubleshoot, document, upgrade and develop maintenance procedures for operating systems, communications environments and applications software.
- 
- Analysts and developers research, evaluate and select information technologies and models to optimize performance and efficiency;
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Why do they choose Python?

- No legacy Perl debt
- **General Language**
 - App/API/Data Process (SE)
 - Automation (DevOps)
 - Integration Test (QE)
- **Data Engineer**
 - Data Analysis (Data)



Job Description

- Specific Skills:
 - practical knowledge related to databases MySQL or PostgreSQL
 - Cassandra, Kafka, Elasticsearch, SQL, Redis, ZMQ, Hadoop, AWS, Apache Solr...
 - Excellent Python (2.x and ideally 3.x) and Django (1.8+)
- Clear Title
 - Django React Full Stack Developer



PRACTICAL KNOWLEDGE
RELATED TO DATABASES
MYSQL OR POSTGRESQL

THAT'S BASIC
REQUIREMENT!

DIANGO 1.8+1, ELASTICSEARCH,
POSTGRESQL, REDIS,
GIT, HADOOP, AWS, APACHE SOLR

CANDIDATE NEED
TO KNOW THEM!

A CLEAR TITLE: DIANGO
REACT FULL STACK DEVELOPER

THAT'S CONVENIENT

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THAT'S CONVENIENT

NOBODY
CARES

I UNDERSTAND

BUT I JUST DON'T CARE



Why do they choose Python?

- Migrating from Perl to Python
 - General Language
- 
- 



Job Description

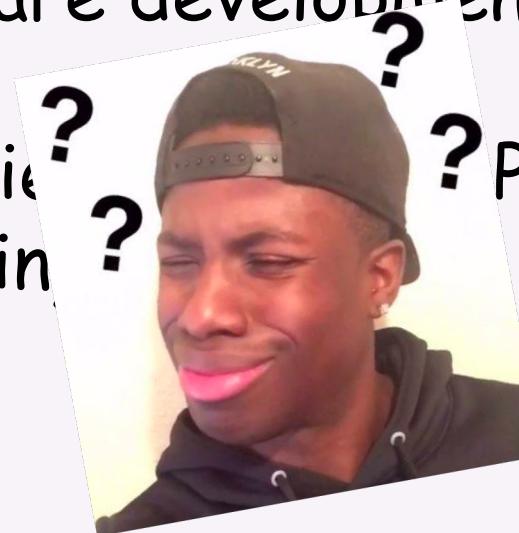
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- Over X years' experience in software development
 - Experience with OOP language including Python

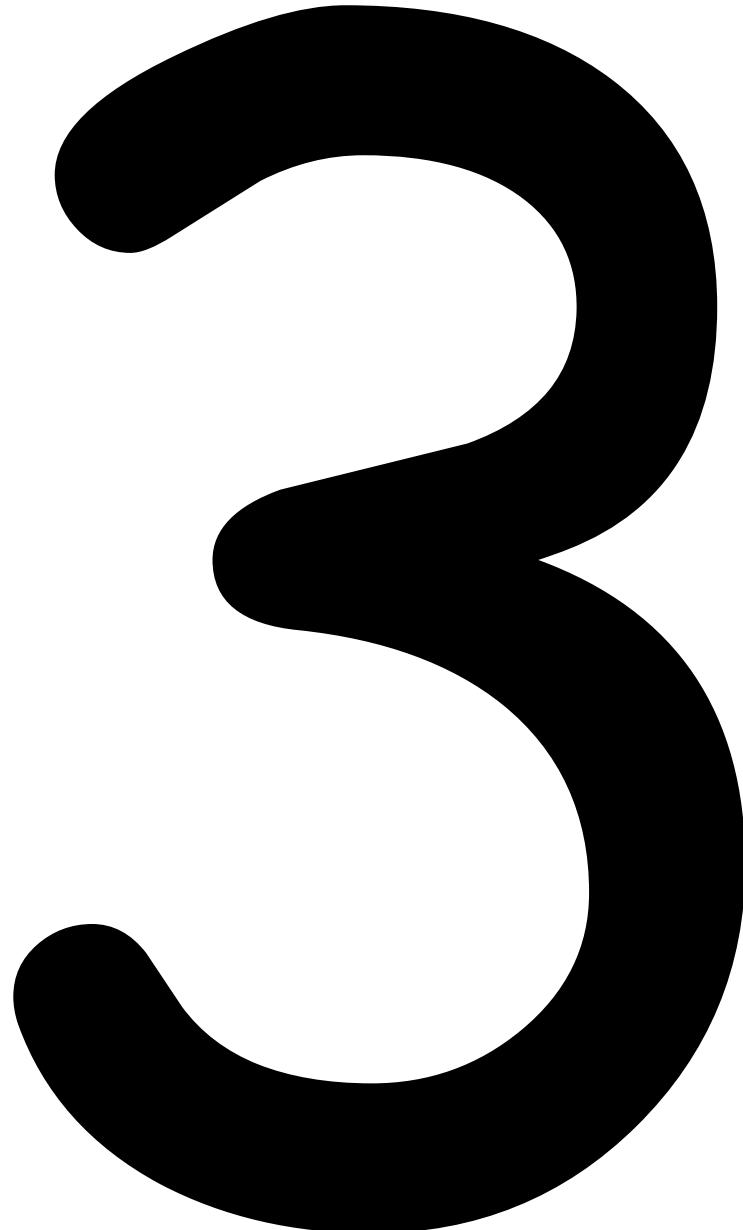




Job Description

- Over X years' experience in software development
- Experience including ? P language





Levels In Python

```
from os import *
```

```
env_list = [param for param in dir(environ)]
```

```
if '__len__' in dir(env_list):  
    available_attr_num = len(env_list)
```

What's wrong?

```
from os import environ
```

```
available_attr_num = len(dir(environ))
```

How to be an python expert?

Level 1



Leetcode medium



Built-in function/module



Decorator/Context manager/Generator



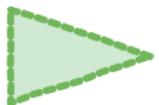
OOP/MRO



Test/Monkey patch



Ecosystem/Trend/Style/History



How to use python?



Level 2

- ✓ Core/GIL
- ✓✓ Design pattern + System design
- ▶ Why to use python?
- ▶ Where to use XXX library/framework?



Level 3

- ✓✓ Python + Integrate with !Python
- ✓✓ Python source code level knowledge
- ✓✓ Library source code level knowledge
- ▶ Where to use Python?



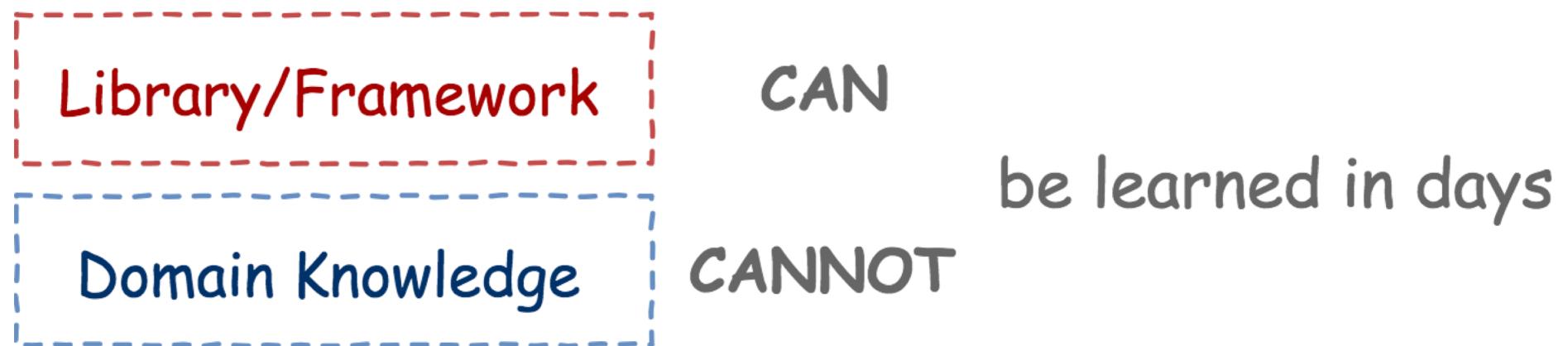
Hiring Bar

(X) Be familiar with XXX

(O) What have you done?

XXX in Giant Company

-> Specific library/framework aren't required



Biome in Giant Company

- > Internal **infrastructure**
 - > start from ZERO every projects
- > Internal **development environment**
 - > XXX can not be used directly
- > Stack Overflow is not enough

[>> amazon-sde-process <<](#)

The wrong road I have traveled

- focused too much on Job description
 - considered XXX library/framework important
- read too many python tricks
- read too many interview feedbacks

brain drain in Taiwan

Why does foreign Company come to Taiwan?

- For entering local market
- For saving cost

Although our technician is competitive

- Our market is not big enough
- We become not attractive for external investment
- We don't focus on SDE-friendly industry

Thanks for your listening