

## PythoniCamp

~ a way forward to quickly nurture Python talent with practical knowledge

**Zoom.Quiet**

*Kingsoft.com*

Zoom.Quiet@gmail.com

**qing feng**

*douban.com*

paradise.qingfeng@gmail.com

### **Abstract**

This article begins with two of our teaching practices inspired by PythoniCamp and discusses how to promote Python in the certain context of China. It covers:

- IT education in China
- Current situation of Python talent
- Practical methodology of PythoniCamp
- Achievements by PythoniCamp practices
- Future Plan of PythoniCamp

## 1. IT education in China

China's IT education is characterized by teaching basic knowledge, which is nothing wrong; however, with too few hands on courses, most students can not integrate theory with practice. As a result, they have superficial basic knowledge without pragmatic competence. Meanwhile it is not easy for companies to take up enough students who can be put into work directly; and all of them have to receive appropriate training after their employment. So the main problem is that there is no link between market and education; universities could not produce talents desired by companies and school students do not know what companies want.

PythoniCamp's biggest goal is to bridge companies and universities; so that companies can have experienced people to lecture in universities to provide students with useful knowledge and to help students find their appropriate learning direction.

### 1.1. University curriculum analysis

From comparison between curriculum for *Computer Science and Technology of Computer Science and Technology Department*<sup>1</sup> of *Tsinghua University*<sup>2</sup> and *MIT open course for Electronic Engineering and Computer Science*<sup>3</sup>, it is concluded:

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1 <http://jwcddata.hrbu.edu.cn:8080/word/kcjj/15.doc>

2 <http://zh.wikipedia.org/zh-cn/%E6%B8%85%E5%8D%8E%E5%A4%A7%E5%AD%A6%E8%AE%A1%E7%AE%97%E6%9C%BA%E7%A7%91%E5%AD%A6%E4%B8%8E%E6%8A%80%E6%9C%AF%E7%B3%BB>

3 <http://www.core.org.cn/OcwWeb/Global/all-courses.htm#ElectricalEngineeringandComputerScience>

### ***Textbook***

- China Colleges and universities all use self-developed textbooks;
- China Textbook-developers are not authorities of related fields;
- China Textbooks are in accordance with national curriculum requirements;
- Generally the national curriculum lags behind social needs for at least 5 years;

This make learning objectives and entire content of this discipline disconnected with real requirements.

### ***Scope of textbook***

- 2/5 is related mathematics / circuit for science students;
- 2/5 is introduction to various computer-related fields;
- 1/5 is involved in development practice, all of which are just M\$ related technologies (VB / C++ / SQL Server).

### ***Content of textbook***

- Nearly half is pure theory;
- Others are mostly characteristics introduction to related technologies;
- As for courses related to computer science, only a few are compulsory and the rest are optional.

### **Learning requirements**

The courses, compulsory or optional, are examined according to the outline of examination and little attention is paid to whether students understand the real purpose of subjects and correlation between each field.

Take "*data structures and algorithms*" as an example,

- it is required to know only what data structures and algorithms are;
- it is required to remember several C / C++ / JAVA-based data structures;
- it is required to write out pseudo codes of several classical sorting algorithm;

with the above knowledge, students will pass the exam!

### **1.2. Eventually**

students only carefully follow their textbooks;

- they do not understand what the software is and how to design a software;
- they have no collaboration experience in software development team;
- they can not operate other kinds of OS except MS.

### **1.3. Employment reality**

At present more than 1000 colleges and universities in China set up computer-related disciplines. Of over 5 million undergraduates enrolled in universities each year, 3% or more enter computer-related departments.

- Nearly 300,000 undergraduates of computer-related major graduate each year, of which nearly 20% choose to continue with graduate school, about 1% are self-employed, and others join the job-seeking force.

- IT industry needs nearly one million employees each year, of which 40% would be computer talents.
- Gap of software testing jobs is up to 200,000; gap of embedded software engineers is 150,000. With rapid development of software outsourcing industry, there is a growing deficit of software engineers using Japan, Korea and other small languages; and the gap of Japanese outsourcing software developer only reaches 300,000 or more.
- There are about 3000 large companies in China and only less than 5% of them have established mature information construction; so state-owned companies have a great potential to take up graduates.

However, current job-placement rate is not optimistic.

### **1.3.1. Actual employment cases**

Take Kinfosft College as an example:

- 600 people sending out an invitation of online test were filtered out from 2700 resumes in July, 2008;
- And 46 passed the test;
- After training, 16 were qualified;
- They were recommended to various departments in August,2008 and 13 of them entered employment;
- The job-placement rate is 0.48%.

Statistics of Beijing City University:

- There are 4 IT-related departments in Beijing City University;
- The number of graduates is 6000; according to incomplete statistics, computer science graduates are about 2000;
- After graduation only about 1 / 80 of students engages in software development; and the proportion is decreasing year by year.
- There is no statistics about students engaged in software development 3 years after their graduation, but it is estimated that the proportion is less than 1 / 100.
- Job-placement rate of college graduates in the province is 7.61%.

### **1.3.2. False employment phenomenon**

Moreover there is false employment phenomenon(named "*Be employed*"<sup>4</sup>) in colleges.

Colleges cook evidence for students' employment status through various ways to show their nice annual "*graduate's employment rate*"<sup>5</sup> .

That is because school's attractiveness depends on "*graduate's employment rate*".

It is believed only good schools have high "*graduate's employment rate*", which will win students and parents over.

And only schools with sufficient number of students could apply to education funding, thus making further development.

4 <http://www.21cn.com/weekly/jobs/index.shtml>

5 <http://orz.se/9JH>

Therefore, many students were unknowingly put into false employment in recent years.

False employment phenomenon shows colleges can not provide students competitive advantages.

### **1.3.3. Why?**

#### **Teaching:**

- Scripted teaching has led to the following phenomena:
- Students can only use a similar secondary mathematics / physics / chemistry approach to study computer science.
- They memorize isolated concepts through doing exercises.
- They can not compile basic software independently.
- They are unable to master programming skills in school because they are used to memorize codes by rote without full understanding of programming.
- Most students can not properly understand procedures and data structures.

#### **Development experience:**

- A majority of students to work do their assignments by directly copying seniors' work.
- Although most of students have their own computers, but they basically use the machine for games rather than for program development.
- Even though some students independently complete their development according to teaching materials, they can not grasp the language features because they do not exercise timely communications with each other.

**Attitude:**

- Most students follow classroom-based courses and rarely go on with their self-learning; this is because most of them just want to get a certificate, which will enable them to enjoy salary of graduate level once employed.
- From primary school to college students are required to do by book; they never take on any course or training concerning work ethic and attitude. Further, students are not asked to independently cope with difficulties but allowed an access to references of seniors' work.
- With exam-oriented education from primary to university, students unwarily take on such thought that they will get promoted through all kinds of tests future in companies, and that there will be students / seniors / teachers available to help them solve problems.
- While facing any pressure their first response is to run away from it or to have make-up exams; they lose their curiosity and courage to explore the unknown on their own.

**Summary:**

Computer discipline of colleges follows the traditional computer science education, whose focus is on systematic theory rather than applicable skills. As a result, some graduates have neither a solid theoretical foundation, nor sufficient application of skills; so it is difficult for them to adapt to needs of computer applications, let alone to meet practicing requirements of IT industry.



However, courses of computer discipline of software colleges and vocational schools are oriented to IT companies. These schools use flexible teaching mode, but they could not bridge the gap between talent training and company demand due to many factors such as lack of actual projects, shortage of training base and quality teachers from the front line in companies.

## 2. Rise of PythoniCamp

The article writer also graduated from a typical Chinese university, and after years of struggling as a quasi-programmer, he entered the free software world through PHP. Since then he got to know the technology community, starting a happy collaborative learning;

Also through self-learning and use of Python he had an access to Python and deep appreciation for its elegant problem-solving performance. His own practice convinced him that this is a very effective technique, which shall be a must for all kinds of software teams.

Then in the ongoing process of “*CPyUG ClassMeet*”<sup>6</sup>, he met practitioners from various industries / fields, which further confirmed that development problems from software companies share common characteristics and efficient teams have something in common. All of these common characteristics can be resolved and expressed by Pythonic thinking.

He also found the aforementioned shortcomings of computing education in communication with them. He summarized causes of college students’ confusion and deficit of self-teaching awareness as well as ability into the following:

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<sup>6</sup> <http://wiki.woodpecker.org.cn/moin/CpugClassMeet>

- There is a gap between students and companies, i.e. students lack solid knowledge foundation while companies need an overall problem-solving capacity.
- Second gap is that students have simple development experience accumulated from assignments while companies need a development team with coordinative ability.
- Another gap is that students are accustomed to exam-driven learning method while companies need a self-motivated self-teaching ability.

Some college students can bridge the above gap through self-training before graduation, generally through self-oriented development or participation in free software development. In the process of continuous development and online communication for at least a year, they are exposed to the integral scenarios of real software design / development / test / promotion, thus gaining a professional quality of a basic programmer. But such kind of students is rare and they either are taken up by companies before their graduation or start their own business.

Basically many students with no real interest in computer just want to get a professional certificate for an IT job; such students will not become a real developer and basically enter marketing / customer services upon their graduation.

Some students are really interested in the computer, but do not know how to learn programming. They take school subjects seriously without knowing they can not be qualified as a basic programmer with such learning.

**These third kinds of students are the target source for PythoniCamp.**

- How to quickly improve these students' ability has always been in the writer's mind. With these thoughts and some experiments he started a variety of internal training,

online FAQ, offline classmeet since 2004 and have accumulated some feasible training methods.

- From October, 2007 he also built his own team in a relevant company by personally conducting recruitment and training to further involve all aspects of activities concerning PythoniCamp. And he had specific implementation plan.
- In July, 2008, for the first time he had a full practice in Kingsoft College.

## **2.1. Kingsoft PythoniCamp**

### **What is Kingsoft?**

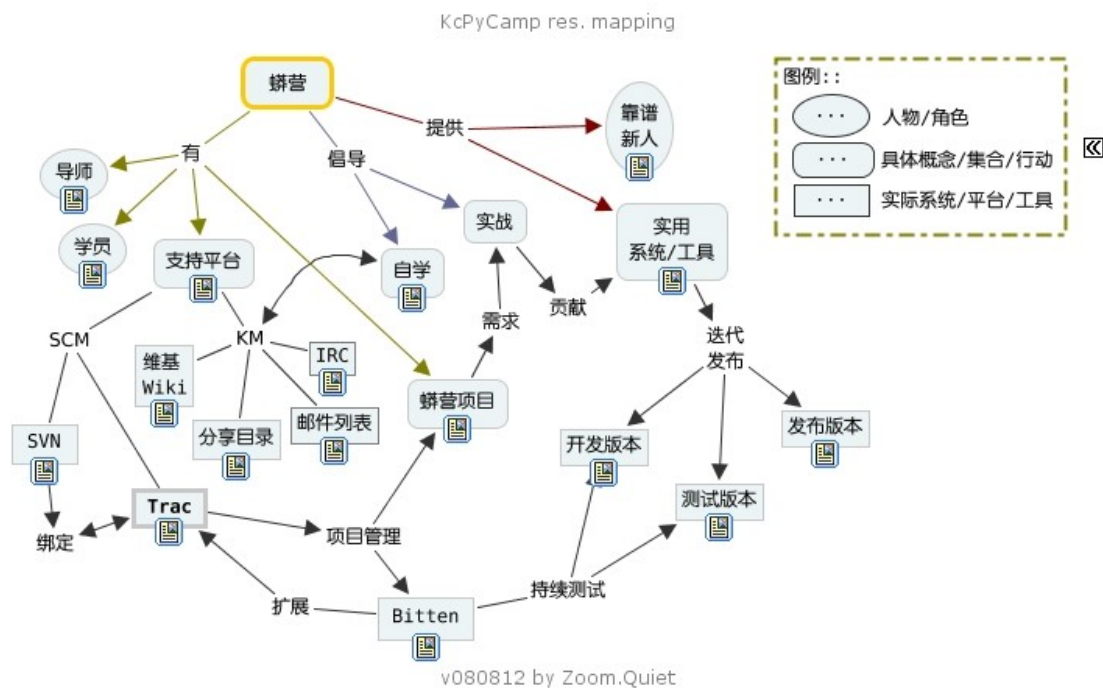
Kingsoft Corporation Limited is a leading software developer, distributor and service provider in China. Kingsoft now has R&D centers in Zhuhai, Beijing, Chengdu, Dalian, and Shenzhen. Two main businesses are software and online games. We have several well-known products such as Kingsoft Office, Kingsoft Power Word & Kingsoft Internet Security.

### **What is Kingsoft College?**

- Kingsoft set up a full-time holiday training camp for the juniors. Through a period of two or three months of training, it provides trainees with basic knowledge in program, independent program development, program development team; and with such comprehensive training it tries to select software R & D talents who could meet the job requirements and have pragmatic skills.

- From 2007, Python has shown its advantages of easy-to-learn and efficient maintenance in its application in all aspects of the company. And some large-scale projects have begun to use Python to perform development. But it's difficult to recruit experienced developers.
- Hereby proposed by some employers, the first PythoniCamp training was held by Kingsoft College and presided over by the writer.

### What is PythoniCamp?



Its full name is ***“Python Experience and Devil-style Training Camp.”***

Through the practice of real projects students are enabled to quickly establish a sense of teamwork and good programming behavior.

- Through the practice of real projects to enable students to establish in the shortest period of time and a good sense of team, "*Kaopulity*<sup>7</sup>" programming habits.
- Students with potentials are identified for relevant companies; and follow-up and training are conducted to make companies to have the right staff at the right time.

Many software companies want to recruit people who have experience and can quickly fit in the team, which is just a deadly disadvantage for college graduates. They need a "catalyst", which can combine students' accumulated knowledge with real working scenario to make students better understand the process of software engineering practice. In the PythoniCamp, we will create a real software engineering environment and through intensive interaction we lead students to learn on their own and to make them go be self-inspired and creative.

### **Why choose Python?**

There is demand for Python Programmer by relevant departments;

- Python is a quickly-mastered script language. Trainees can collaboratively finish relatively complete work within a few weeks, thus experiencing the entire software development life cycle;
- Python is a pure tool-type script language. It can be mastered in the shortest time, so trainees can focus on problem solving rather than on development skills of the language itself (in order to force trainees to give up textbook-style waterfall-like development process which is picked up in school.)

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<sup>7</sup> Kaopulity ~ zip for "Keep all of processes usability", one technical term created by Chinese programmer; means the all kinds of practices of agile and practical develop attitudes.

### 2.1.1. Training program

#### Trainee:



- Target source is those who pass the preliminary test of the Kingsoft College.
- Source trainees are fresh graduates majoring in computer-related disciplines from 14 universities.

#### Organization structure:

- Three teachers from the department where the writer serves to give routine instructions and answer questions and guide their development; the writer presides over all kinds of routine “standing” meetings.

- One assistant teacher from Kingsoft College is responsible for routine maintenance of the training camp, such as monitoring student activities and giving them a rate accordingly.
- User representative, reported by four contact persons, is responsible for inquiry of users' requirements by collecting their actual needs from 7 systems in 4 departments; user representative is also responsible for the final work acceptance.

**Program:**

The camp provides short yet necessary knowledge lectures and immediately enters trainees into the work environment for development.

- Once lecture: introduction of Python; about 50 minutes; target: recruit voluntary participants from Kingsoft college;
- Once lecture: Python job description; about 30 minutes; target: introduce jobs in Kingsoft and PythonicCamps 'development for boosting students' confidence;
- Two lectures: basic Python training; about 100 minutes each; target: describe practical Python knowledge to nurture Pythonic thinking and instruct Python learning direction;
- Twice lectures: guide to PythonicCamp activities; about 50 minutes each; target: describe collaborative thoughts of a development team; introduce development management tool platforms; instruct conventions for use of development

environment; set up the weekly-updated agile and iterative development method and practicing details.

课堂资料:::

导入讲演

- [Python 快速介绍v0.9.1](#)
- 1. [080717-campy.ogg](#) 080717快速介绍录音 [AlbertLee](#) 主讲
- [蟒营理念v080729](#)
- 1. [080728-cpc-start.ogg](#) 蟒营开班导入 [ZoomQuiet](#) 主讲
  - [080811-cpc-ini.ogg](#) 蟒营开班导入 [ZoomQuiet](#) 080811主讲
- 2. [080728-cpc-netapp-sa.ogg](#) NetApp SA 职位急招说明 [AlbertLee](#)
- 3. [080811-cpc-itemsV0803.ogg](#) NetApp开发项目简介 [AlbertLee](#)

开发速讲

- [Python 简介\(MarchLiu\)v080725](#)
- 1. [080729-py-tut-1.ogg](#) Python编程语言~[简易入门指导](#) [MarchLiu](#) 主讲
- 2. [080729-py-tut-2.ogg](#) Python编程语言~[简易入门指导](#) [MarchLiu](#) 主讲
- 3. [080811-cpc-py-AM.ogg](#) Python编程语言~[简易入门指导](#)080811-AM [MarchLiu](#) 主讲
- 4. [080811-cpc-py-PM.ogg](#) Python编程语言~[简易入门指导](#)080811-PM [MarchLiu](#) 主讲
- [Trac精简教程 + 版本/项目/知识管理浅谈](#) SVN+Trac+Wiki的日常工作模式
- 1. [080731-trac-svn-wiki.ogg](#) SVN+Trac+Wiki的日常工作模式 [ZoomQuiet](#) 主讲
- 2. [080812-cpc-vm-trac-km.ogg](#) VM/PM/KM速讲 [ZoomQuiet](#)
- [Trac精简教程v080811](#)
- 1. [080811-wpsupport-tracV0801.ogg](#) 面向产品组的Trac 介绍 [ZoomQuiet](#) 主讲

沟通录音:::

Py教材

- [Python 零海接入门](#) 修订ing..
- [Python Tutorial](#) for Pythonv2.5.2
  - [Python教程](#) for Python v2.3.3
  - [简明 Python 教程](#)
- [DiP ~ 深入 Python](#)v5.4b

Wiki教材

- [蟒营维基教程](#)

外部资源

- Python 环境
- 1. 官方下载: <http://www.python.org/download>
- 2. 推荐下载: <http://aspn.activestate.com/AS/ActivePython>
- SVN教程:
  1. [使用Subversion进行版本控制](#)v1.2
  2. [最快SVN入门教程](#)
  3. [小乌龟使用指南](#)

After that, the camp immediately asks trainees to team up according to their interest to take on their project and perform the iterative development until the PythoniCamp training session is over.

## Training method:

### *Real project team!*

Provide perfect development management tool platforms:

- Use SVN for version management <https://kpcycamp.googlecode.com/svn/trunk/>
- Use Trac for task / bug tracking (intranet <http://trac.rdev.kingsoft.net/kpcycamp/>)



- Use the mailing list for open discussion <http://groups-beta.google.com/group/kcpcycamp>
- Use online communication in IRC #kcpcycamp (freenode.net)
- Use the wiki for knowledge sharing <http://wiki.rdev.kingsoft.net/moin/KcPyCamp>

金山蟒营: [蟒营理念](#) / [蟒营心情](#) / [蟒营规章](#) / [张焱项目](#) / [蟒营资源](#) / [维基教程](#) / SCM: 主机 / 对外: 高校

金山蟒营

~ 金山训练营 Python特训班

支持与建设

- 团队管理: <http://trac.rdev.kingsoft.net/kspeg> 4 kc: <http://kcpy.kc.kingsoft.net/kspeg>
- 沟通技法: [提问的智慧](#) / [邮件规范建议](#) / [33制](#)

Camp dialy

蟒营目标

- 快速学习Python
- 体验协作团队
- 造就资深新人!
- 贡献实用系统

IRC沟通

心情日志

参考: [08Q3周历](#)

乐 / 常 / 怒

08Q3周9 08.25-08.29						
Name	Mon.	Tues.	Wed.	Thur.	Fri.	Sat. Sun.
~	25/08	26/08	27/08	28/08	29/08	30/08 31/08

2008提醒

- 080825\_上周评分及排名
  - 蟒营的7位老成员的评分及排名
  - 13位新成员的评分及排名
- 080820\_上周评分及排名
  - 蟒营的7位老成员的评分及排名
  - 13位新成员的评分及排名
- 080813\_上周评分及排名
- 08-7-暑期研后期培训课表

### Guide iterative development:

Select iterative development manager and contact person by the team to conduct development and coordination respectively as well as requirement management.

Actual development is promoted by regular meetings:

- Answering questions twice a week:
  - Questions are submitted to the assistant teacher through various channels before 17:00 on Monday/Thursday or to teachers through mail before 17:30.
  - Q & A at 11:00~11:30 on Tuesday/Friday.

- A milestone meeting once in a week:
  - Regular weekly meeting is held at 11:30~12:00 on Friday to demonstrate development results of this week.
- “Standing” meeting is conducted twice a day to coordinate daily development:
  - Each one talks about his task of the day at 09:00~09:15.
  - Each one summarizes his progress of the day and main difficulties at 16:45~17:00.

(all meet,had sound recordings,and published into wiki)

http://wiki.s.kingsoft.net/moin/KcPyCamp			
1.	<a href="#">080811-meet-AM.ogg</a>	080811 AM 站立晨会	<a href="#">ZoomQuiet</a>
2.	<a href="#">080812-meet-PM.ogg</a>	080812 PM 站立小结	<a href="#">ZoomQuiet</a>
3.	<a href="#">080813-meet-AM.ogg</a>	080813 AM 站立晨会	<a href="#">ZoomQuiet</a>
4.	<a href="#">080813-meet-PM.ogg</a>	080813 PM 站立小结	<a href="#">ZoomQuiet</a>
5.	<a href="#">080814-meet-AM.ogg</a>	080814 AM 站立晨会	<a href="#">ZoomQuiet</a>
6.	<a href="#">080815-meet-AM.ogg</a>	080815 AM 站立晨会	<a href="#">ZoomQuiet</a>

### Sprint2

1.	<a href="#">080818-meet-AM.ogg</a>	080818 AM 站立晨会	<a href="#">ZoomQuiet</a>
2.	<a href="#">080818-meet-PM.ogg</a>	080818 PM 站立小结	<a href="#">ZoomQuiet</a>
3.	<a href="#">080819-meet-AM.ogg</a>	080819 AM 站立晨会	<a href="#">ZoomQuiet</a>
4.	<a href="#">080820-meet-AM.ogg</a>	080820 AM 站立晨会	<a href="#">ZoomQuiet</a>
5.	<a href="#">080820-meet-PM.ogg</a>	080820 PM 站立小结	<a href="#">ZoomQuiet</a>
6.	<a href="#">080821-meet-AM.ogg</a>	080821 AM 站立晨会	<a href="#">ZoomQuiet</a>
7.	<a href="#">080822-meet-AM.ogg</a>	080822 AM 站立晨会	<a href="#">ZoomQuiet</a>

### Sprint3

1.	<a href="#">080825-meet-AM.ogg</a>	080825 AM 站立晨会	<a href="#">ZoomQuiet</a>
2.	<a href="#">080826-meet-PM.ogg</a>	080826 PM 站立小结	<a href="#">ZoomQuiet</a>
3.	<a href="#">080827-meet-PM.ogg</a>	080827 PM 站立小结	<a href="#">ZoomQuiet</a>
4.	<a href="#">080829-meet-PM.ogg</a>	080829 PM 站立小结	<a href="#">ZoomQuiet</a>

### 闭营总演示 080829 AM

1.	<a href="#">080829-V001-MB-end.ogg</a>	M.B 团队演示和总结	
2.	<a href="#">080829-V002-CCRJ-end.ogg</a>	CCRJ 团队演示和总结	
3.	<a href="#">080829-V003-HHD-end.ogg</a>	HHD 团队演示和总结	
4.	<a href="#">080829-V004-VER-end.ogg</a>	VER 团队演示和总结	
5.	<a href="#">080829-V005-EAR-end.ogg</a>	EAR 团队总结	
6.	<a href="#">080829-cpc-faq-end.ogg</a>	闭营总结和答疑	<a href="#">ZoomQuiet</a>

Teacher shall be open-minded and answer trainees' questions as far as possible as a colleague but never to offer help. If no students ask questions, the teacher shall cultivate trainees' self-motivated learning and experiment attitude by putting up and asking questions himself in the standing meeting; the teacher shall repeat a variety of practical thoughts needed in work and the following:

- "Teachers can provide all the help on the condition that you have to be clear of what you want."

- "For any problem, when the meaning of the problem is clearly defined, the problem has been resolved by half."
- "99.9% of difficulties encountered in the process of development also have been encountered and solved by others, and what you shall do is just to found it out."
- "For a problem, only when it has been known and thoroughly considered by the whole group, its solution could be the most reliable."

Etc.

### **Assessment:**

Focus on identifying potential and selecting the one who can adapt well in psychology / awareness; pay attention to the code forming process and team efficiency rather than quality of codes.

Focus on good behavior ; put forward maximum quantitative targets; provide an objective assessment for trainees' adaptability!

Assistant teacher records daily rates; publish the results, but **did not announce the details of the assessment standards** <sup>8</sup>.

- A total of 44 assessment points of 20 items
- As for potentials, focus on self-learning habits and leadership potential
- As for collaboration, focus on teamwork and communication skills

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<sup>8</sup> *Simulate the real workplace scenarios of potential rules*

- As for skills, focus on developing capacity / efficiency / habits

### **2.1.2. Training results**

The first session of PythoniCamp in 2008-08

- 22 participants out of 35 students
- 2 drop-outs
- 5 development teams
- Final completion and delivery of 3 systems
- 5 trainees passing the examination
- 3 trainees taking on by companies
- Job-placement rate of 14% is 30 times of that of social recruitment.

### **2.1.3. Achievements by trainees**

#### **1. MogBench:**



- code: <http://kpcycamp.googlecode.com/svn/trunk/MogBench/>

- name: Mogilefs File System Management Tools

- feature: base Django, Simple and practical Mogilefs file cluster management and analysis interface.

## 2. CCRJ:



- code: <http://kpycamp.googlecode.com/svn/trunk/kcCCRJ/>
- name: Kingsoft College C++ Code Rule Judger
- feature: Based on the command line, presented on the training camp trainees to submit C++ code, automatic code standard examination of 14 rules;

```
C:\WINDOWS\system32\cmd.exe
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\color_macro.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\constant.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\debugnew.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\klight.cpp
有问题
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\klight.h
有问题
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\lightmain.cpp
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\consta
nt.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\klight
.cpp
有问题
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\klight
.h
有问题
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\LightO
ff8_5.cpp
有问题
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\LightO
ff8_5.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\resour
ce.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\StdRfX
.cpp
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\LightsOff\WINDOWS\StdRfX
.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\空当接龙\color_macro.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\空当接龙\constant.h
符合代码规范
C:\Documents and Settings\kcs0006\桌面\CCRJ\第二次作业\空当接龙\debugnew.h
符合代码规范
```

### 3. VER:

- code: <http://kcpycamp.googlecode.com/svn/trunk/kcVER/>
- name: Virus Encyclopedia Robert
- feature: Command-line tool, can simulate the administrators of <http://vi.duba.net/>, read the virus analysis, and automatic submit entries;

### 4. HHD:



- code: <http://kcpycamp.googlecode.com/svn/trunk/kcHHD/>
- name: Human Resources Handbook
- feature: Interview management platform prototype, the interviewer can manage the time scheduled, the interviewer resumes, interview progress and scores

## **2.2. BCU PythoniCamp**

### **1.2.1. Traing program**

As weekend class: on weekends; 4 hours per day; continue for about half a year.

#### **Learning targets:**

- Stage I : Basic Python
- Stage II: Python high-level language features: yield expression and metaclass object
- Stage III: Django, GAE

### **2.2.2. Achievements by students**

Herostory <http://code.google.com/p/herostory/>

One student developed a complete Japanese-style 2D game engine in order to end the game books API development by exercising all aspects of Python. For this API engine, you can create any of SLG or RPG game. And through this project the student learned the use of Python test cases, making the engine stronger.

School teachers platform <http://code.google.com/p/bcuteachingweb/>

Through this platform, teachers can post homework and courseware, and students can learn online and submit their homework online. This platform makes the teaching process more transparent. Through this program, the student completed learning of the Django and Django Admin.

**Early Education Net** <http://github.com/hexuotzo/khufu>

This is a real project. In addition to using the Django, the student also compiled a number of Python scripts to facilitate the operation and maintenance. The student also learned how to optimize Mysql, memcache, etc. and had a lot of practical work experience needed for the actual work.

### **2.2.3. Training results**

there are about 1-2 people in each class will engage in software development ;

Currently the number of students taught in the 5, full employment, and all the software companies in the formal

## **3. Conclusions and ideas**

### **3.1. PythoniCamp Fast training methods:**

- Choose Python as the development language is reasonable practice, students can focus project immediately;

- Iteration through real projects, can be very effective ideological indoctrination of various practical projects;

- Agile project management approach to promote, you can create enough pressure to stimulate student awareness of transformation

- Ensure the points to success:

- Consistency of goals and organizational behavior

- All initiate, master only guide the sidelines

- A real job requirement, a clear improvement of student motivation

- Notes:

- communication between teacher and students as staff and equality

- communicate at any time

- assessment of the standards can not open

### **3.2. PythoniCamp Future Planning:**

Collecting teaching data, a complete lesson plans, and to promote the ultimate hope that within 5 years:

- enter two or more cities

- enter 4 or more university

- Completion of eight or more PythoniCamp

- Transportation to more than 10 enterprises have the potential of Python programmers

set up : "**four-win situation**"

1. Schools do not specifically invited to a company of experienced teachers to guide learning, but ,can get a good rate of employment
2. Students need to spend the extra training costs, in the shortest possible time, the school-type passive learning, transformation to active problem-oriented learning and behavior patterns, to improve the success rate of applicants
3. Recruitment services to companies do not pay extra, can get from the community list of potential students, and job-related skills prior to educate, to improve the success rate of recruitment
4. Community without extra effort, can have clear objectives and a variety of support projects, their love and ability to play, feedback communities, to improve the technical community's influence

Promotion :

- Joint **ZEUX**<sup>9</sup>, the PearlRiverDelta-tech-party<sup>10</sup>, `CPyUG`, set up a "PythoniCamp" speaking groups; in well-known student community (**5xue**<sup>11</sup>) to carry out publicity in the past lesson plans

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9 <http://www.zeux.org/about/about.html>

10 <Http://techparty.org>

11 <http://www.5xue.com/>

- Joint one Zhuhai university, in carrying out multi-stage "PythoniCamp", in the well-known throughout the community to track student progress and student experience report
  - Joint `ZEUUX`, Experience teaching team to provide for online activities, support functions and conduct a virtual online "PythoniCamp"
  - All lesson plans combine to form a perfect "PythoniCamp" norms, training masters, and different universities in different cities to carry out;
    - Control of the annual "PythoniCamp" scale, selected to ensure a stable rate of corporate relations, Start boutique style of promotional activities;
    - Accumulation of all the media resources, production of teaching films, try the online media in communication, receive feedback, and further amendments to try to promote remote universities, voluntary organizations of all sizes "PythoniCamp"

## **4. References**

### **4.1. Community CPyUG ~ China Python User Group**

- founded: 2005-07-30
  - Organization : mailling list python-chinese@lists.python.cn (python-cn@google ) Core members obligation to act as management
  - Daily online discussions, irregular off line held `ClassMeet`:
    - `ClassMeet` ~ Members from all over `CPyUG`, self-organized technical exchange meetings

- Basic organizational processes:
- the first initiative in the list, collecting topics
- Various topics will be completed on time to lectures and exchanges, online publishing all kinds of information (in [wiki.woodpecker.org.cn](http://wiki.woodpecker.org.cn) posted slide / audio / photo)
- Continued online discussion
- Achievement
  - <https://groups.google.com/group/python-cn> Python programmers gathered more than 8500, is the world's largest technical list of Chinese Python
  - The `*ClassMeet*` had be 5 years in total more than 40, nearly 2,000 people in cumulative direct participants
  - At least five times to enter the school, for Python language propaganda
  - released several open source works ,such as:UliPad / UliWeb
  - startup `*O.B.P*<sup>12</sup>` , organize a series of python original or translation related technical books

## **ZEUUX**

- Zeuux is the leading innovative online community and collaboration platform to serve the free software community in China. We develop zeuux system that powers zeuux.com by the free software technology, zeuux has the innovation user experience design and supply the instant message, email, calendar, social network, blog and event applications, to serve the

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12 <http://code.google.com/p/openbookproject>

community to get more connected. We believe zeuux will be great helpful to promote the free software movement in China, and let more people know the ideas of free software.

- We also hold the Zeuux Free Software Summit that's a annual event to promote the free software in China.

- Currently, there are 25 people in the zeuux core team, and we also have a great advisor team that includes Richard Stallman, Li Songbo, Marshall Kirk McKusick, Guido van Rossum, Ni Guangnan, Mikko Puhakka, Gong Li, Lu Shouqun.

- For more information, please visit <http://www.zeuux.org>, and contact email is [info@zeuux.org](mailto:info@zeuux.org)

## 4.2. Organization

**Kingsoft.com** <http://www.kingsoft.com/>

- Kingsoft Corporation Limited is a leading software developer, distributor and service provider in China. Kingsoft now has R&D centers in Zhuhai, Beijing, Chengdu, Dalian, and Shenzhen. We have several well-known products such as Kingsoft Office, Kingsoft PowerWord, Kingsoft Internet Security and online games such as "JX Series" and "The First Myth". Kingsoft has set up some of China's largest online communities, including the most popular domestic online English learning website [www.iciba.com](http://www.iciba.com) and the online games website [www.xoyo.com](http://www.xoyo.com).

- On October 9th, 2007, Kingsoft was listed on the Hong Kong Stock Exchange (stock code: 03888.HK). 2008 was the 20th anniversary of Kingsoft. After twenty-year's struggles



and development, Kingsoft will continue to accelerate the internationalization strategy based on techniques.

- Kingsoft people have never doubt their goal is to become a world-class software provider.

**Kingsoft College <http://www.kingsoft.com/zt/2008/kscollege/index.html>**

Kingsoft college like "Whampoa Military Academy," is to foster research and development talent, love of software development for all beginners and those interested in the potential development of the software industry talent. Through a period of two to three months of training, basic knowledge in the process, independent program development, program development, and so the team integrated Pei Yang on the students, and strive to meet the position requirements to build, be combat software R & D personnel.

**Beijing City Univercity <http://www.bcu.edu.cn>**

- BCU was founded in 1984, the Ministry of Education approved the establishment of a national first by private colleges and universities, now colleges. Beijing City University has formed a more complete multi-disciplinary, multi-level forms of training high school talent in the professional system and pattern of the national advanced unit of Private Higher Education Institutions.