

# Qichao Zhang

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## Technical Skills

Operating Systems	Ubuntu, ArchLinux, Gentoo, CentOS
Languages	C, Java, PHP, JavaScript, C++, Python, Bash
Softwares	Vim, Git, GDB, IntelliJ, Eclipse, Maven
Frameworks	jQuery, Yii, Backbone, Spring, Spring MVC

## Experience

**Jiangsu Zhongzheng InfoTech Ltd** 2012-7-20 to 2012-12-20

- A entrepreneurial team, working on a platform website to serve NJU students, using PHP and Yii Framework.
- My job here mainly includes: designing the authentication for OAuth2.0 and supplying APIs for the open platform, besides some front-end development (using jQuery and Bootstrap).
- Here, I learned a lot about team cooperation and front-end to backend interaction.

## Projects

**UWS**, A lightweight http web server 2012 - 2013

- Independent Project, developing with C language, aiming to build a high performance http server, it has similar configuration file with *nginx*.
- Implemented functions: custom error pages, 304 status, deflate and gzip compression, http basic authentication, url rewrite, simple reverse proxy and FastCGI support.
- Performance: under Ubuntu in a VMware instance having 512M memory, it can handle 7kqps of *apache benchmark* test in single process mode.
- To solve the memory leak problem, I wrote a memory pool named *usmem*, referring the design of Loki.
- I also write a demo site: <http://demo.lecoding.com>

**DistMEM**, A NoSQL database 2012 - 2013

- Independent Project, developing with C++. It provides simple APIs, like set, get and del.
- It provides simple APIs, like set, get and del. It has 4 data types: int, float, string and list, and string is binary safe.
- The data file implementation take the design of the FAT12 file system and it uses B-Tree as index structure, also I add LRU cache for better performance.
- The protocol of communicating refers the *Redis* specification, so it's cross-platformed, and I wrote a client console using Python.
- Besides, I developed a PHP extension named *php\_distmem* (written in C) to supply access to distmem.

**NJU Wenji**, A web site for literature lovers 2012

- Cooperative project, based on Yii Framework. It's a project I written with seniors, providing a site for NJU literature lovers. My job mainly includes:
- Integrating with SNS and share with others using OAuth2.0
- Comment, includes post comments and display
- A Markdown-like language interpreter, translating specific article format to HTML
- A jQuery plugin of building a dropdown list in a textarea
- Other trivial jobs like supplying RESTful APIs and building front-end interaction

- UPLEX**, Python Lex interpreter 2012
- Independent project, A lex implementation using Python language, according to <Compilers>.
  - Regular expression engine is its core function, using the procedure NFA->DFA->mDFA, we can get a minimized DFA, it can deal with simple regexp. This program can read a \*.l file and generate a runnable py file.

- Lily-PHP-SDK**, NJU Lily BBS API Wrapper 2011 - 2012
- Independent project, develop with PHP. Lily BBS is too old to supply standard API, so I using curl to crawl the site and resolve useable APIs. Here are some sub-projects:
  - *Lily-ME*: A mobile site of Lily BBS using jQuery Mobile and Lily-PHP-SDK.
  - *Lily-Mobile*: This is an android app for Lily BBS, enhanced the bbs and using proxy to save network cost.

- Other projects** 2011 - 2013
- Light blog, A blog app based on Yii Framework and jQuery
  - Remote whiteboard, based on Java and Swing, I am in charge of software architecture, audio transmission and message queue.
  - Some Python websites on *Google App Engine*, like blog, disk and notepad. view online
  - NJU-Courses-Select chrome plugin, using for grabbing hot courses.

**Education**

GPA	4.1/5.0
CET4 / CET6	617 / 546
Renming 3rd class scholarship	

**Links**

<u>Blog</u> :	<a href="http://lecoding.com">http://lecoding.com</a>
<u>GitHub</u> :	<a href="https://github.com/usbuild">https://github.com/usbuild</a>
<u>Twitter</u> :	<a href="https://twitter.com/usbuild">https://twitter.com/usbuild</a>