# YU, LIANG

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## Full Stack Skills

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|---|---|
| Project: | Agile, Scrum, Kanban, Confluence, Jira |
| System: | macOS, Redhat, CentOS, Ubuntu, Unix |
| Coding: | Java, C/C++, Python, Lisp, LaTeX |
| Scripting: | Shell, Tcl, sed, awk |
| Testing: | GDB, Postman, Jmeter, Testlink, Wireshark, Zabbix, SIPp, EXFO |
| Mobile: | iOS, Swfit, SwiftUI, Objective-C, Android |
| Web : | Javascript, HTML, JSP, OpenSSL, OpenSSH |
| Networking: | REST, SOAP, VoIP, SIP, IPSec, NAT |
| Backend: | Nginx, Tomcat, Redis, MySQL |
| Cloud: | AWS, Azure, OCI, OpenStack, VMware |
| DevOps: | GIT/SVN, Docker, Kubernetes, CI/CD |
| Tools: | Xcode, Eclipse, PyCharm, IntelliJ IDEA, VIM |

## Experience

### Oracle
Bedford/Burlington, MA

Senior(since 2019) Software Engineer in Test      6yr and 9mo. 2014.2 - 2020.11

✓*SBC Tunnel Session Management(TSM)*

- Served as the solo test personal in this project, the "go-to" person on TSM urgent issues, documented 200+ defects, including critical performance and capacity issues.

- Extended the test coverage of TSM SDK by 5 times and added 1000+ new automation test cases on iOS, Android and Linux platforms, refactored the Tcl scripts into shared library for better reusability.

- Built on-premise testbed with Android phones, iPhones, multiple SBC and 20 Linux VMs across 5 X5-2 Servers, setup Zobbix tool to monitor the network connections and data packets.

- Coordinated resources across QA, Datapath and Application teams to ensure urgent defects were fixed and verifed on schedule, and provided test guidance on customer-reported issues.

✓*SBC Security Team*

- Be the first to write the Tcl scripts to automate the TACACS+ test cases and reproduced the urgent customer defect in shell scripts.

- Configured the AAA servers (TACACS+ and Radius) and tested authentication, authorization and accounting features for configuration-abled local users and default factory accounts.

✓*SBC Virtualization on Private and Public Cloud*

- Deployed virtualized SBC and Linux VMs on the AWS and Azure cloud, led the effert to migrate the Anvil Test framework to the cloud.

- Integrated EXFO APIs into Tcl scripts to automate multiple performance test cases, decreased weeks of mannual test effort for different vm core combinations to a couple of days and increased the usage of expensive test equipments in the night time.

- Used SIPp tool to initiate SIP calls between SBC on AWS and Azure clouds, configured openssl certificates in SBC, veried the strong ciphers were used in the VOIP calls.

✓*SBC Rest Interface*

- Collaborated with Dev team in a fast-paced Agile enviroment, ensured code quality by leveraging TDD method

- Served as the test expert to test the SBC configuration API with automation scripts and Postman tool, opened dozens of defects and provided guidance to sort out the priority

## Integrated Computer Solutions

Software Enginner

Bedford, MA

11mo. 2013.4 - 2014.2

✓ *Inkarus HTML5 and Javascript Game Project*

- Implemented functions to synchronize the score and screenshot of the winner to Azure Cloud and retrieve data from the cloud with WinJS libraray and HTML5.
- Added three advertisement banners in the GameOver page by leveraging the Microsoft Advertising SDK

## Acme Packet

Software Enginner Intern

Bedford, MA

8mo. 2012.1 - 2012.9

✓ *Applicatioin Session Controller (ASC) Team*

- Developed the Call-Transfer web services application with Java, Dojo and GWT/GXT.
- Helped with ASC automated testing framework by writing test cases in Python.
- Enhanced the quality of an existing iOS mobile application by fixing bugs and improved its UI and workflow by implementing good interface design principles.

## Northeastern Univeristy

Student

Boston, MA

2yr. 2010.9 - 2012.12

✓ *Analyzing company stock prices via twitter data*

- Processed 1.7 billions twitter messages and 50 millions stock records with Hadoop on a ten-node cluster.
- Used Pig Scripts to sample of the twitter messages and Java to implement the algorithms.

✓ *Porting MTCP from Linux to Mac OS X 10.6*

- Analyzed the implementation of MTCP under Linux and listed all the differences in Mac OS X.
- Probed the memory boundaries(stack, heap, data and text sections) of a process under Mac OS X, by using self-defined SIGSEGV handler and setlongjump call() in C.

✓ *Probing Operation System*

- Experience in mult-processing programming in C.
- Wrote c codes to mimic the mirroring, string, RAID3 and RAID5 operations.
- Implemented a file system with methods like mkdir, rm, read, write and ls.

✓ *Scientific Community Game Project*

- Wrote network-flow avator in Java and wrote unit tests to ensure it can be integrated into the exsited SCG Arena.
- Used Jenkins Continuous Integration System to do the build automation.
- Used EclEmma to measure the test coverage in the SCG project.

## Education

### Northeastern University - Boston, USA

2010.9 - 2012.12

M.S. in Computer Science

- Program Design Paradigms in Lisp ◇ Advanced Algorithms
- Computer System ◇ High Performance Computing
- Parall Computing in MapReduce ◇ Managing Software Development in **Java**

### Nanchang University - Nanchang, China

2005.9 - 2009.6

B.S. in Computational Mathematics

- Assemble Language(IBM X86) ◇ Introduce to Database
- **C** Programming Language ◇ Data Structure in **C**