

## LIANG YU

### Full Stack Software Engineer

Permanent Resident  
Boston, MA 02138

Email: [yuliang.name@gmail.com](mailto:yuliang.name@gmail.com)  
Cell: 617-901-0618

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#### (a) Education & Courses

Computer Science	Northeastern University	Boston, MA, USA	M.S., 2012.12
Computational Mathematics	Nanchang University	Nanchang, Jiangxi, China	B.S., 2009.6
Language:	C Programming Language, Program Design Paradigms in Lisp		
Algorithms:	Data Structure in C, Algorithms, Advanced Algorithms		
Software:	Managing Software Development(Java), Parallel Computing in MapReduce, Introduction to Database		
System:	Assemble Language(IBM X86), Computer System, High Performance Computing		

#### (b) Skills

MacOS&iOS:	Swift • SwiftUI • Objective-C • Xcode
System	CentOS, Red Hat, Ubuntu, C, C++, GDB, Shell
Web	Java • Eclipse • REST • SOAP • Postman • Jmeter
Networking:	SIP/RTP, TLS/SSL, IPsec, Wireshark, SIPp, EXFO, Fiddler
Others:	MySQL GIT • SVN • Jira(Kanban,Scrum,Bug) • TestLink Pycharm LaTeX Python Lisp Tcl

### EXPERIENCE

#### (c) Oracle America Inc. | Senior (since 2019) Software Engineer in Test

Bedford/Burlington, MA 2014.2 - 2020.11

##### 1. SBC Security Team

- two factor authentication
- local users
- authentication authorization
- Executed tests related to authentication and authorization and accounting with remote AAA servers (TACAS+ and Radius)
- Wrote test scripts for TACACS+ test. and simulate performance test to reproduce the customer's defect
- Tested the DDOS protection feature in the SBC

##### 2. SBC Virtualization on private cloud and public cloud

- Deployed the virtualized SBC and Linux VM on the AWS cloud and Azure cloud.
- Integrated the EXFO APIs into the Tcl script to automate various performance test cases that would otherwise be repeated for different CPU core combinations (signaling, forwarding, Transcoding or DOS cores)
- decreased the week of manual test effort to a couple of days and increased the usage of expensive test equipments in the night time
- Installed the in-house made Anvil test framework on the VMs in the public clouds and solved the library dependency issues. bring the automation test framework to the cloud environment
- Designed the networking diagram for the testbed on the clouds and documented it on the confluence page.
- Performed Capacity Tests on the AWS and Azure platform
- Tested the SIP call between the AWS cloud and Azure cloud

##### 3. Dedicated teacher and mentor, evidenced by numerous awards:

- Spark Award, "for inspiring the next generation of women in science", Harvard, 2009
- Fannie Cox Award, given annual

##### 4. SBC REST Interface Project

- Used the scrum board to track the work progress in the Agile mode.

- Added hundreds of test cases into automation testframe(RAID) to leverage the night time to run the daily regression test.
- Used the Postman App to test SBC Configuration APIs.
- Opened dozens of defects and helped developers to sort out their priorities and fix them.

#### 5. **Tunnel Session Management Project**

Deployed to Linux, iOS and Android platforms

function, capacity, performance, regression test, Testbed lab, automation test scripts,

- refactored the test scripts to fit for cooperation, sort the functions into different files based on the purposes
- Wrote scripts to automate more than 1,000 test cases for TSM SDK, which extended the test coverage by 5 times.
- Built a real scenario testbed with Android phone, iPhone, SBC, Zabbix monitoring, linux tools from multiple VMs.
- Enhanced the existing iOS/Linux/Android apps to test new features.
- Wrote shell scripts to execute the capacity and performance test.
- Familiar with TLS/SSL protocols and socket programming in Linux Environment.
- Designed test plan documents
- Raised 200+ product defects, including critical defects that affected performance and capacity.
- Cooperated with Dev Team, Datapath Team and Application Team to close the defects.

#### (d) **Integrated Computer Solutions | Software Developer**

2013.4 - 2014.2 | Bedford, MA

1. Topics Project (Android App)
  - Wrote unit tests with pytest framework in Ubuntu environment.
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2. Inkarus Project (Javascript Game on Windows Tablet)
  - Implemented a function to synchronize the score and screenshot of the winner to Azure Cloud and retrieve data from the cloud by using WinJS library and HTML5.
  - Implemented the Ads feature with the Microsoft Advertising SDK.

#### (e) **Acme Packet | Software Developer Intern**

2012.1 - 2012.8 | Bedford, MA

1. Application Session Controller (ASC) Project
  - Contributed to ASC automated testing framework by writing Python scripts.
  - Developed a Call-Transfer web service application by calling the SOAP API in Javascript.
  - Created VMs on the XenServer to run various SIP tests.

#### (f) **TinBoston App | Apple iOS Developer**

2017 - 2018 | Boston, MA

1. MVP
  - Rewrote UI in SwiftUI, REST API calls with Combine Framework
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