

Chenguang Liu *PhD Candidate* at The University of Texas at Austin

Software Engineering and Systems track, Department of Electrical and Computer Engineering
liuchg@utexas.edu • +1 (512) 718-3850 • www.liuchg.com
2501 Speedway, EER 7.852 • Austin • Texas • 78712

Education

- The University of Texas at Austin** AUSTIN, TEXAS
PhD Student in Software Engineering 2014 – Present
Advisor: **Christine Julien**, Area: Mobile Systems & Pervasive Computing GPA: 3.92/4.0
Courses taken: Engineering Programming Languages(C++), Advanced Programming Tools(Web/Mobile), Distributed Systems, Computer Architecture, Communication Complexity, Software Evolution, Software Testing, Programming with Molecules ...
- Peking University** BEIJING, CHINA
M.E. in Software Engineering 2011 – 2014
Advisor: **Huiping Lin**, Area: Context-aware Systems
Courses taken: Advanced Operating System, Middleware, Design Patterns, Algorithm Analysis ...
Research projects: Remote healthcare system, context-aware service recommendation.
Received the Distinguished Master's Thesis Award.
- Beijing Jiaotong University** BEIJING, CHINA
B.E. in Software Engineering 2007 – 2011
Courses taken: Programming Languages(Java, C/C++), Data Structure, Computer Network ...

Publication*

- Chenguang Liu, Jie Hua, and Christine Julien. Scents: Collaborative sensing in proximity iot networks. In *Pervasive Computing and Communications Workshops, IEEE 17th International Conference on*, 2019
- Chenguang Liu, Jie Hua, Changyong Hu, and Christine Julien. Stacon: Self-stabilizing context neighborhood for mobile iot devices. In *Pervasive Computing and Communications Workshops, IEEE 17th International Conference on*, 2019
- Chenguang Liu, Christine Julien, and Amy Murphy. Pinch: Self-organized context neighborhoods for smart environments. In *Self-Adaptive and Self-Organizing Systems(SASO), IEEE 12th International Conference on*, pages 120–129. IEEE, 2018
- ^[α] Christine Julien, Chenguang Liu, Amy Murphy, and Gian Pietro Picco. Blend: Practical continuous neighbor discovery for bluetooth low energy. In *Proceedings of the 16th International Conference on Information Processing in Sensor Networks (IPSN)*, pages 105–116. ACM, 2017
- Chenguang Liu and Christine Julien. Pervasive context sharing in magpie: Adaptive trust-based privacy protection. In *Proceedings of the 7th EAI International Conference on Mobile Computing, Applications, and Services*. Springer, 2015
- Chenguang Liu, Huiping Lin, and Yibing Xiong. A web service recommendation approach based on situation awareness. In *Services Computing (SCC), 2013 IEEE International Conference on*. IEEE, 2013

Internship Experience

- Google Inc.** Mountain View, California
Software Engineering Intern May '18 – Aug '18
Interned in the Play commerce infrastructure team. Implemented micro-services for evaluating refund transactions, redesigned data storage pipeline and a simulator using *anonymized* history data.
Tech: Async Java, AF producer graph, Boq services, Guice dependency injection, Storage.
- Google Inc.** Mountain View, California
Software Engineering Intern May '17 – Aug '17
Interned in the Gmail Ads infrastructure team. Implemented a user event logging pipeline in the Adserver. Using this new data source, I established a scoring feature based iterative training system to *rank* the user received promotional emails in the promo tab (*Top Picks* section).

* Selected

^[α] Alphabetical order

Tech: C++, Supervised ML(Sibyl), Producer Graph, FlumeC++, Scaffolding, Sawmill logging, Storage.

IBM - The China Systems and Technology Lab

Beijing, China (ibm.com/cdl)

Software Engineering Intern

Aug '11 – Nov '11

Interned in the zOS management facilities group. Contributed to develop the web version of management facilities for the Z-series mainframes, later participated in integration testing.

Ericsson

Beijing, China (ericsson.com/cn)

Software Engineering Intern

Mar '11 – Aug '11

Developed the Margin Analysis System which aims to promptly evaluate the potential defects of developing radio base stations.

Project Experience*

Automatic Bazel Migration

Course Work (Software Evolution)

Developed a migration tool that automatically translates the build system of a software project from Apache Maven to Google's Bazel.

Tested our tool with 15 open source projects to show the merits of migration automation.

(Language used: Bash and Python. Env.: Emacs)

C++ STL and template metaprogramming

Course Work (Engr. Programming Languages)

Implemented a Vector template class similar to `std::vector`.

Designed an event-driven simulator of life forms to simulate moving, hunting, spawning and collision using concepts in OOP.

Implemented a Valarray template class using the concept of proxies and SFINAE to perform computation at compile-time and to reduce run-time overhead.

(Language used: C++. Env.: g++)

Mobile apps

Misc.

Developed some iOS/Android applications during spare time. Below are two examples:

TOEFL Assistant: this app was developed to help a friend to better prepare for the TOEFL speaking section and vocabulary building. I implemented some interesting features like button-free.

Expense Splitter: this app aims to help people who live together to split their bills(e.g. utility) and living expenses (grocery/commodity costs) evenly and wisely. It also provides task planning and spending analyzer tools to ease the burden of managing shared expenses.

(Language used: ObjC, Java. Env.: XCode, Android Studio)

Teaching Experience(TA)

EE382V-Advanced Programming Tools

Instructor: Christine Julien

Fall 2017, UTAustin

EE382V-Mobile Computing

Instructor: Christine Julien

Fall 2016, Fall 2018 UTAustin

EE461L-Software Engineering and Design Laboratory

Instructor: Christine Julien, Meiru Che

Spring 2015, Fall 2015, UTAustin

0DG02-Integrated Enterprise Management Systems

Instructor: Andreas Nunnemann(SAP)

Spring 2013, Peking Univ.

0C101-Software Component and Middleware

Instructor: Huiping Lin

Fall 2012, Spring 2012, Peking Univ.

Skills

Programming languages: Love C++ and Java. Proficient in C/Bash/Go/ObjC/Python.

Tools/Platforms: Linux, Emacs, Eclipse, Android Studio, Code Composer Studio, IntelliJ, Visual Studio, XCode, \LaTeX

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