Kai Ling

ling59@purdue.edu

EDUCATION

Purdue University — **West Lafayette, USA**
PhD(expected) Department of Computer Science — Aug 2019 - Present

Huazhong University of Science and Technology (HUST) — **Wuhan, China**
Bachelor of Science in Computer Science and Technology — Aug 2015 – July 2019
GPA: 3.8/4.0

AWARDS

1. Freshmen Scholarship (1 out of 120), HUST — 2015
2. National Scholarship (2 out of 120), HUST — 2017
3. Model Student of Academic Records (5 out of 120), HUST — 2017
4. Awarded Outstanding Student (4 out of 120), HUST — 2017

RESEARCH EXPERIENCES

Research Assistant | MSSN Lab | Purdue — **West Lafayette, US**
Advisor: Chunyi Peng, Assistant Professor, Purdue University

Handoff Project — Oct 2019 - Present

- Investigated an important yet unexplored performance problem of the performance gap between devices get in reality and what they can get at best in operational cellular networks.
- Collected cell information data for 739 hrs and 8756 kms in terms of four primary operators in United States.
- Made a first attempt to uncover, quantify and understand such great missed performance(up to 60x miss at one location) in the wild.
- Offered a more efficient way to make the existing data more readable and comparable from the aspect of time and space.

Mobility Management Map — Jul 2018 - Nov 2018

- Enabled the instant processing and instant echo of huge data containing handoff configurations from more than 32,000 cells and over 18,700 handoff instances worldwide.
- Reorganized the database and designed a brand new way to show data to make the process of analyzing and displaying data run ten times faster than before.
- Developed an automatic online service which visualizes handoff configuration data and the data analysis to better support mobility research.
- Offered a user-friendly way to show handoff configurations of the cells and spatial statistics in the special area of user interests.
- Prepared a poster which was adopted by the ACM Internet Measurement Conference (IMC 2018) as their official Poster.

PUBLICATIONS

Conference Papers

- 1. Haotian Deng, **Kai Ling**, Junpeng Guo, Chunyi Peng, *Unveiling the Missed 4.5G Performance In the Wild*, ACM Hotmobile 2020, accepted.

Posters

- 1. **Kai Ling***, Jiaqi Xu*, Zhuo Jiang*, Haotian Deng, Chunyi Peng, *MMMap: Mobility Management Map of Global Carriers Networks At Your Hands*, ACM Internet Measurement Conference (IMC'18) Poster, accepted. (*co-first authors)
- 2. **Kai Ling**, Haotian Deng, Junpeng Guo, Chunyi Peng, *Poster: Unveiling the Missed 4.5G Performance In the Wild*, ACM Hotmobile 2020, accepted.

SELECTED COURSE PROJECTS

Project Leader| A Managing System For Online Reservation | HUST — Sept. 2017– Nov. 2017
Course: ***Software Engineering***

- Built a reservation system to register online in hospitals solely with many functions, following the standards in Software Engineering such as data flow diagram and IPO sheet;
- Utilized the structured analysis and OOA to analyze the requirements of the doctors, patients and the managers of the hospital;
- Obtained a high score of 96 in the project evaluation, ranking the Top 3 in all teams;

Project Leader| A Chat Software Based on UDP And TCP Protocol| HUST — Nov. 2017– Jan. 2018
Course: ***Computer Network***

- Independently implemented several functions, such as chatting online and offline, supporting mutliple groups, and transporting files based on UDP protocol
- Improved the UDP protocol to realize reliable data transmission;
- Obtained a high score of 89 in the project evaluation;

LEADERSHIP AND ACTIVITIES

Piano Pedagogy | Chorus of HUST — Sep 2016 - Present

- Performed at more than 20 concerts.
- Praised by many professors including Gregory Wait, Dean of the Department of Music at Stanford University.
- Entered the national competition finals during the University Students Arts Festival.
- Volunteered for the Internet Innovation and Entrepreneurship Competition in 2016.

SKILLS

- **Programming Languages**: Proficient in C/C++/JAVA/Python, Assembly Language, Matlab;
- **Languages**: Mandarin (Native), English (Fluent, with ample experience in scientific English reading and writing).