Liuzixuan (Peter) Lin

Rm 381, 5730 S Ellis Ave, Chicago, IL, 60637, U.S.A
Email: lzixuan@uchicago.edu
Homepage: https://lzixuan.github.io

EDUCATION

The University of Chicago, Chicago, U.S.A 09/2019 - now
Ph.D. Student in Computer Science
Advisor: Prof. Andrew A. Chien

Peking University, Beijing, China 09/2015 - 07/2019
Bachelor of Science in Computer Science and Technology
Bachelor of Economics

RESEARCH INTEREST

I'm currently working on approaches to reduce the carbon footprint of data centers, which include data analytics on data from power grids/data centers and system experiments.

RESEARCH EXPERIENCE

Zero-carbon Cloud (2019.10 - now)
Advisor: Andrew A. Chien (The University of Chicago)

- Exploring the opportunities of exploiting "stranded power" in power grids.
- Analyzed the data from power grids and data centers for downstream tasks such as grid modeling, prediction, and optimization.
- Designed and implemented system experiments on data centers in the power grid.

Inferring Urban Regions' Functions Based on Social Media Text Analysis (2018.2 - 2018.11)
Advisor: Yanchun Sun (Peking University)

- Extracted information from microblogs to infer the topics in a region (e.g., food, travel) with NLP methods.
- Integrated sentiment information (e.g., ratio of positive microblogs) to the topics with a LSTM classifier.

Extracting Referenced Datasets from Social Science Papers (2018.7 - 2018.9)
Advisor: Ian Foster / Kyle Chard (The University of Chicago)

- Summarized the development of named entity recognition (NER) methods.
- Designed and implemented a model based on bidirectional LSTM with CNN and CRF layers, which reads the raw text of social science papers and outputs dataset candidates with the sentences where they appear.

PUBLICATIONS

Liuzixuan Lin and Andrew A. Chien. Automated Classification of Power Plants by Generation Type. *The 11th ACM International Conference on Future Energy Systems* (**e-Energy'20**).

TECHNICAL REPORT

Liuzixuan Lin and Andrew A. Chien. Characterizing Stranded Power in the ERCOT in Years 2012-2019: A Preliminary Report. *TR-2020-06, The University of Chicago*.

TEACHING

TA for Software Engineering 2019 Spring
Instructor: Prof. Yanchun Sun, Peking University

SELECTED AWARDS

Crerar Fellowship, the University of Chicago 09/2019
Excellent Graduate, Peking University 05/2019
Yang Fuqing & Wang Yangyuan Academician Scholarship, Peking University 11/2018
Merit Student, Peking University 11/2018

SKILLS

Programming Skills: C/C++, Python, Java for Android, x86 Assembly, parallel computing (OpenMP, OpenCL, MPI), data visualization (D3.js), Julia.
Languages: Mandarin Chinese (native), English, Cantonese.

SELECTED COURSE PROJECTS

Labs on Computer Organization and Architecture

- Built a benchmark to test the comprehensive performance of a computer.
- Independently completed 10K lines of code on projects including a RISC-V simulator, a cache simulator and an image processing program with SIMD instruction sets.

Mobile Application Development

- Applied methodology of Software Engineering to the project, from demand analysis to software testing.
- Developed two Android applications respectively about identifying events on campus and sharing comments on cafeterias.

Novel Visualization

- Developed a web application with D3.js that visualized the story line and interaction between characters in Jin Yong's Wuxia novels.