

# Zipeng Liu

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## Research Interests

- Information Visualization
- Visual Analytics

## Academics

- **Uniniversity of British Columbia** Vancouver, Canada  
*Candidate for Master's Degree in Computer Science* Sept. 2015 – Now
- **Peking Uniniversity** Beijing, China  
*Bachelors of Science Degree in Computer Science* Sept. 2011 – Jul. 2015
- **Technion - Israel Institute of Technology** Haifa, Isreal  
*Research-Exchange Student in Faculty of Electrical Engineering* Sept. 2012 – Feb. 2013

## Research Experience

- **VAST Challenge 2014 Mini-challenge 3 (Award for Excellent Collaborative Streaming Analysis)**  
*Advised by Prof. Xiaoru Yuan (Peking University)* Jun. 2014 – Jul. 2014
  - Led the collaboration of the analysis process.
  - Designed a flexible filter and interfaces for streaming messages.
  - Implemented both the client and server side to enable collocated synchronized cooperation.
  - Organized and wrote most of the answers to the challenge.
- **Visualization of Social Media Flows with Interactively Identified Key Players**  
*Advised by Prof. Xiaoru Yuan (Peking University)* Nov. 2013 – Apr. 2014
  - Reviewed literature of visualization on information diffusion.
  - Designed and implemented the key component: interactive multi-faceted filter for identifying special users.
  - Wrote part of a poster and filmed an introduction.
- **Overlay Distribution Networks for Live Streams**  
*Advised by Prof. Ymir Vigfusson (Reykjavik University) and Prof. Daniel A. Freedman (Technion)* Feb. 2012 – Sept. 2013
  - Implemented our overlay distribution network protocol in python twisted, which I maintained and conducted experiments on.
  - Wrote a baseline system for comparison and conducted analysis of simulating parameter space.
  - Reviewed literature on distributed system design, Internet substrate topology evaluation methodology, etc.

## Work Experience

- **“Full-stack” Developer** May. 2015 – Jul. 2015  
*Supervised by Xiaodi Hou and Jianan Hao* Beijing Cogtu Network Technology Co., Ltd.
  - Was in charge of frontend dev team; developed management consoles for business clients.
  - Involved in a large scale web spider of the online social media Weibo.
  - Conducted experiments of collaborative filtering on Weibo data.

- **Python Backend Developer**

*Supervised by Lvyi*

*Sept. 2014 – Nov. 2014*

*Beijing Dohing Network Technology Co., Ltd.*

- Built a web backend capable of supporting 1M users for an instant messaging application.
- Maintained the backend system which contains Tornado, Nginx, Redis, MySQL, MongoDB.
- Implemented a responsive web page of a product.

## Publications and Posters

- Xiaoru Yuan, Zhenhuang Wang, **Zipeng Liu**, Cong Guo, Hongwei Ai, Donghao Ren.  
Visualization of Social Media Flows with Interactively Identified Key Players.  
*Proc. IEEE Symp. Visual Analytics Science and Technology (VAST)*, Paris, France, 2014 (Poster).
- **Zipeng Liu**, Zhenhuang Wang, Siming Chen, Zuchao Wang, Zhengjie Miao, Xiaoru Yuan.  
A Platform For Collaborative Visual Analysis on Streaming Messages.  
*IEEE Symp. Visual Analytics Science and Technology (VAST) Challenge*, Paris, France, 2014.  
**Award Winner of VAST Challenge Mini-challenge 3.**
- Ymir Vigfússon, Annie Liu, **Winnie Liu**, Yuanchao Zhu, Gunnar S. Sigurbjörnsson, Kristyan V. Jonesson, Qi Huang, Ken Birman, Daniel A. Freedman.  
Balancing Cost and User Utility for Live Network Streaming.  
*Proc. Asia-Pacific Workshop on Systems (APSys)*, Seoul, Korea, July 2012 (Poster).
- Ymir Vigfússon, Annie Liu, **Winnie Liu**, Yuanchao Zhu, Gunnar S. Sigurbjörnsson, Kristyan V. Jonesson, Qi Huang, Ken Birman, Daniel A. Freedman.  
Live Network Streaming with Utilities and Cost.  
*6th ACM SIGOPS/SIGACT Workshop on Large-Scale Distributed Systems and Middleware (LADIS)*, Madeira, Portugal, July, 2012.

## Technical and Professional Skills

- **Programming Language:** Proficient in Python, HTML/CSS/Javascript; familiar with C/C++, Java, Assembly
- **\*NIX Tools:** L<sup>A</sup>T<sub>E</sub>X, Bash Script, Git, Makefile, Fast Text Processing, Plotting, Illustrator
- **Miscellaneous:** D3.js, MPI, MySQL, MongoDB, Redis, Nginx
- **English Proficiency:** Peer reviewed paper, top conference poster, oral presentation

## Selected Course Projects

- **Paraiso Wiki Edit History Visual Analysis** *2013 – 2014 Fall*  
Visualized relationships between major authors of a wiki page.
- **CSAPP Lab Package** *2013 – 2014 Fall*  
Accomplished all labs (and bonus) from the famous CMU CS textbook.
- **Building a Unix-like Operating System - JOS** *2013 – 2014 Spring*  
Implemented several parts of a mini operating system.
- **Multithreaded Bank Simulation** *2012 – 2013 Fall*  
Used Pthread for concurrency control.
- more on <http://zipeng.me/projects/>

## Extracurricular Activities

- **Experienced Calligrapher**  
*Won several national/provincial calligraphic awards*
- **Amateur Badminton Player**  
*Served the Badminton Team of EECS in PKU*