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Xiang Li

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Objective Seeking a Software Development Engineer Internship from **mid-May** to **mid-August**, 2017

Education

Rice University, Houston, Texas *Expected Dec. 2017*
Department of Computer Science
Master in **Computer Science** track from Computational Science and Engineering program
GPA: **3.7**/4.0

Shanghai Jiao Tong University, Shanghai, P. R. China *Aug. 2016*
University of Michigan - Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)
Bachelor in **Computer Engineering**, with major GPA: **3.5**/4.0

Computer Skills

Programming Languages: Java, Javascript, C/C++, C#, Python, SQL, HTML/CSS, Verilog
Platforms/Frameworks: Git, SVN, Vim, Node.js, React/Redux, Hadoop, Jenkins, MyBatis, Hibernate

Work Experience

Software Engineer Intern, Transwarp Technology, Shanghai, P. R. China *Feb. 2016 - Apr. 2016*

- Constructed an integrated test environment on **Jenkins** for a five-person development goup
- Designed connection methods for company's own Hadoop database with DBCP connection pool and ORM frameworks (Mybatis, Hibernate), along with supporting **batch processing** operations

Project Experience

Full-stack Web Development for an Online Social Network *Sep. 2016 - Dec. 2016*

- **Front-end url**: `https://renren.surge.sh` (supports Chrome best)
- **Back-end url**: `https://mysterious-scrubland-92641.herokuapp.com`
- Used **React/Redux** and Bootstrap in **ES2016+** (webpack) to develop front-end web pages (landing, main, and profile), allowing logged-in users to add friends, post articles and update profiles
- Implemented an **Express** server on **Node.js**, connected to **MongoDB**; it supports authenticated login/logout and CRUD operations for profiles, avatars, articles, comments and followers
- Added user authentication (salting by hash, cookie), session management via **Redis**, third-party authentication via **OAuth2, Passport** (Facebook), and permanent image uploading via **Cloudinary**

GIS-map-based Client-Server Game *Nov. 2016 - Dec. 2016*

- Players in each team move on the NASA WorldWind map to be together within certain rounds
- Created lobby and team chat rooms, supporting real-time conversations based on **Java RMI**
- Implemented **message passing** in all communications (not using Java JMS), handling well-known and unknown commands from senders; achieved cmd-to-cmd communication for game processing
- Compatiable with other groups' clients of their own implementations

Software for Distributed Printing Service, sponsered by *HP*, Team Leader *Sep. 2015 - Dec. 2015*

- Saved at least **70**% **print time** for those small companies who meet large print jobs ($>$ 500 pages) but cannot afford expensive printers, by fully utilizing existing normal printers simoutaneously
- Designed a **genetic algorithm** to intelligiently allocate print jobs to different printers
- Handled issues including paper jam and paper fault, and supported customization function
- Coded in **C#** to accomplish computer-printer interactions, in around 2000 lines of codes

Operating System and Cryptography Projects in C *May 2014 - Dec. 2015*

- Wrote a **unix-like shell** using system calls , supporting common commands
- Completed **earliest-deadline-first scheduling** and **lottery scheduling** in Minix 3
- Impelmented **AES** and **RSA** Encryption/Decryption

CPU Design and Verification *Oct. 2014 - Nov. 2014*

- Coded a five-stage MIPS **pipeline CPU** and verified it on a FPGA board with common instructions
- Resolved **all data/control harzard issues** using forwarding and hazard prediction technique

Selected Publications

Research interests in **computer networks** and **network security**

- **Xiang Li**, Mengyuan Li, Na Ruan, Fan Wu, and Jie Li, *"Efficient and Enhanced Broadcast Authentication Protocols based on Multilevel μTESLA"*, in Proceedings of the 33rd IEEE International Performance Computing and Communications Conference (**IPCCC**), Dec. 2014 (acceptance rate: 30%)
- Na Ruan, Lei Gao, Haojin Zhu, Weijia Jia, **Xiang Li** and Qi Hu, *"Toward Optimal DoS-resistant authentication in Crowdsensing Networks via Evolutionary Game"*, in Proceedings of the 36th IEEE International Conference on Distributed Computing Systems (**ICDCS**), June 2016 (acceptance rate: 18%)