Xiao Shi

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WORK EXPERIENCE

Software Engineer, Facebook, Cambridge, MA   **Feb 2016 – Present**
- Develop globally distributed storage and caching systems to serve data
- Design and implement distributed systems to enhance data consistency

Research Assistant, Prof. Dan Spielman, Yale Inst. for Network Science   **Jan 2015 – Dec 2015**
- Designed and optimized linear solver for Laplacian systems
- Analyzed convergence of iterative algorithms for absolutely minimal Lipschitz extension on graphs

Software Engineer Intern, Facebook, Menlo Park, CA   **Jun 2015 – Aug 2015**
- Added features in the Hack language that allow users to reflect on types in a type-safe manner
- Realized and optimized type introspection feature in HHVM (the runtime virtual machine)

Research Assistant, Prof. Yang Richard Yang, Yale CS Dept   **Jan 2015 – Dec 2015**
- Designed and refined Application-Layer Traffic Optimization (ALTO) Protocol
- Architected ALTO integration into the OpenDayLight controller
- IETF drafts: draft-ietf-alto-incr-update-sse, draft-shi-alto-yang-[json|model]
- Designed and implemented `Megellan`, a system which compiles high level Software Defined Network policies into OpenFlow flow tables. (Technical Report: YALEU/DCS/TR1504)

Software Developer Intern, D. E. Shaw & Co.   **Jun 2014 – Aug 2014**
- Implemented a python library `Transposer` to perform map-reduce on remote clusters using ∅MQ
- Created interactive visualization tool for the `LATTE` market simulator
- Developed a trading strategy to identify and capitalize on sudden extreme price movements

Research Intern under NSF(REU) grants, CertikOS Group, Yale CS Dept **Apr 2013 – Jun 2013**
- Modified and enhanced Real-Time Operating System `nuttX` for `PX4` drone platform
- Analyzed and benchmarked `nuttX` and CertikOS (Certified Operating System Kernel)
- Researched on migrating CertikOS from Intel x86 to ARM architecture

Undergraduate Teaching Fellow, Yale University   **Jan 2012 – Dec 2015**
- CS112/CS113 Programming and Entrepreneurship, MATH244 Discrete Math, CS365 Algorithms
- Aided curriculum development: CS468 Computational Complexity, CS426 Decentralized Systems

EDUCATION

Yale University, New Haven, CT   **Sep 2011 – Dec 2015**
- **B.S. Computer Science** with distinction; **Magna Cum Laude**
- **Cumulative GPA:** 3.91/4.00, **Major GPA:** 4.00/4.00   **Phi Beta Kappa** Honor Society
- **Thesis:** Iterative Algorithms for Lipschitz Learning on Graphs
- **Selected Coursework:**
  Algorithms, Convex Optimization, Complexity Theory, Spectral Graph Theory;
  Operating Systems, Distributed Systems, Advanced Cloud Systems;
  Networks, Databases, Software Engineering

SELECTED AWARDS

ACM/ICPC (International Collegiate Programming Contest), Greater New York Region   **2011**
- Top all-freshman/sophomore team, ranked 10th overall out of 50 college teams

National Olympiad in Informatics, China   **2006 – 2010**
- Attained 1st (top 1%) or 2nd Prize all 5 years. Perfect score in 2007 and 2008.
- Top 0.04% (35 out of over 80000 contestants), candidate for Provincial Programming Team

Intel Application and Innovation of Computer Science Contest, China   **Mar 2008**
- Individual Silver Medal, 6th of 100 finalists; 3-person Nanjing Team ranked 2nd of 30 teams

Olympiads in Mathematics (China and USA)   **2007 – 2009**
- 1st Prize (top 3%), National Olympiad in Mathematics, China
- 1st Place in Missouri in AMC12/AIME, top 0.6% in USA, qualified for USAMO

SKILLS

Programming	C/C++, Rust, Python, Java, Bash, assembly, SQL, OCaml
Data Analysis	Julia, numpy, Matlab, Mathematica
Web	Javascript, jQuery, LAMP, Hack
Graphics	Flash, Illustrator, InDesign, Lightroom, Photoshop
Other	LaTeX, Linux (Ubuntu, CentOS, Gentoo)
Languages	Chinese (native), English (fluent), German (intermediate)
Hobbies	Classically-trained tenor, running, watercolor