Bowen Cai

www.caibowen.com   bowen.cai@tamu.edu

Chinese with F1 Visa
Texas A&M University, College Station
Mobile: 979-985-6333

Education	**Master of Science in Computer Science**, Texas A&M University, U.S.A. GPA: 3.38. Advisor: Dr. Jeff Huang.	Jan 2016 – Dec 2017 (expected)
	B.E. in Computer Science. Northwestern Polytechnical University, P.R. China GPA: 84/100, top 10%, graduated First Class.	Sept 2011 – Jun 2015
	Exchange student at the Delft University of Technology**,** the Netherlands.	Oct 2014 – Mar 2015

Skills

Proficient in **Scala**, **C++**, good at **Python**, **C#** and Ruby**.**
Work experience with **MySQL, Java EE,** and **HTML5.**
Experience in **LLVM** (research projects), **GTest**, **TestNG, cryptography, network programming.**
Basic Client-side develop skills with **Qt**, **Swing**, **Android.**
Effective communication and collaboration skills.

Experience

Internship at **Alibaba-Inc**, server-side Java developer, got a return offer.   July – Oct 2014
1. Upgraded Wangqi 2.0 with new libraries, fixed bugs in user input checks.
2. In WangXin 3.0 project, implemented commenting and voting functions on the server-side with Spring, designed and implemented admin web console.

Internship at **Zhuoyuan Information Technology**, front-end developer.   Jul – Aug 2013
   presented and synced data using ExtJS and Springframework.

RoboCup 3D Simulation Team, developer.
Implemented and tested new motion algorithm for robot players to improve its speed and stability.   Aug – Dec 2012

Projects

1. Research in Program Analysis and Concurrent Bug Detection:
   a) Shiyou Huang, **Bowen Cai**, Jeff Huang. Towards Production-Run Heisenbugs Reproduction on Commercial Hardware. **USENIX ATC2017**. Acceptance Rate: 21% (60/283). Implemented Ball-Larus path profiling in LLVM and tested it on several large programs.
   b) **Bowen Cai**. Code Parallelization through Sequential Code Search. Student Research Competition, **ICSE 2016**. Implemented a prototype code search engine (Github CodeSniffer)
   c) Implemented and tested a new redundant event filter for ThreadSanitizer (Github Tree-CPP).
   d) Developed a use-after-free detector for multithreaded programs on LLVM.
2. Advanced Compiler Design Course: data-flow analyze and source code optimization for Fortran-77.
3. Program runtime monitor and analyze (PRMA): a distributed logging backend server for monitoring application servers and localizing bugs, implemented in Scala with AKKA.
4. Slingshot: a simple functional language implemented in C#.
5. eBay-like online C2C (Spring 2014): as the leader of a 13-man team, we developed a complete online C2C shopping website, including searching, transaction, advertising, and admin consoles for seller/buyer.
6. Gplume (Fall 2013): designed and implemented a Java/Scala web framework (similar to Springframework), it supports dependency injection, JSP, JSON, JDBC, Web MVC, etc. Several websites were built using my framework.
7. Some other fun spare-time programs on Github (github.com/xkommando).