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| **Bowen Cai**  *www.caibowen.com bowen.cai@tamu.edu* |  |
| College Station, 77840, TX |
| Mobile: 979-985-6333 |

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| **Education** |  |  |
| **Master in Computer Science**, Texas A&M University, U.S.A.  GPA: 3.38. Advisor: Dr. Jeff Huang. | | Jan 2016 – May 2018  (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#;** experienced in **JavaScript, Ruby**, **PHP**.  Work experience with **MySQL,** **Java EE,** and **HTML5.**  Experience in **compiler** techniques and **LLVM**, **GTest**, **TestNG, cryptography, network programming.**  Experience in client-side development with **Qt**, **Swing**, **Android.** | | |
| **Experience** |  |  |
| **Research Assistant**, Parasol Lab, Texas A&M. Program Analysis. | | Jan 2016 – Jun 2017 |
| * Shiyou Huang, **Bowen Cai**, Jeff Huang. Towards Production-Run Heisenbugs Reproduction on Commercial Hardware. **USENIX ATC2017**. Acceptance Rate: 21% (60/283). Developed Ball-Larus path profiling on LLVM. * **Bowen Cai**. Code Parallelization through Sequential Code Search. Student Research Competition, **ICSE 2016**. Implemented a prototype source code search engine (Github CodeSniffer). * Developed a novel redundant event filtering technique for ThreadSanitizer tested on Chromium (Github Tree-CPP). * Research on predicting concurrent use-after-free bugs, including a program tracer (build on LLVM Compiler-RT), and an offline analyzer; find bugs on MySQL and PHP. (Github UFO and UFO-Postprocess). * Advanced Compiler Design Course: developed many source code optimization algorithms for Fortran-77. | | |
| Internship at **Alibaba-Inc**, Hangzhou, China. Backend Java developer. Got return offer. | | July – Oct 2014 |
| * Adopted new libraries to Wangqi 2.0; reimplemented anti-phishing functions. * In WangXin 3.0 (50M users), implemented backend functions for Dese commenting and voting; developed micro service for Dese; designed and implemented admin web console. | | |
| Internship at **Zhuoyuan InfoTech**,Xi’an, China. Frontend developer. | | Jul – Aug 2013 |
| * In an enterprise integration project, presented and synced data using ExtJS and Spring MVC. | | |
| C++ developerat **RoboCup 3D Simulation Team**, College Innovation Center, China | | Aug – Jan 2013 |
| * Developed new motion algorithm on Simspark emulator, improved robot’s speed and stability. | | |
| **Side Projects** |  | |
| * Program runtime monitor and analyze (PRMA, fall 2014): a distributed logging backend for monitoring application servers and localizing bugs, implemented in Scala with AKKA (github.com/xkommando/PRMA). * Slingshot: an interpreted functional language implemented in C# (github.com/xkommando/Slingshot). * eBay-like C2C site (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 (Github C1\_ParknShop). * Gplume (Fall 2013): designed and implemented a Java/Scala web framework (pay homage to Springframework), it supports dependency injection, JSP, JSON, JDBC, Web MVC, etc. Several websites were built using my framework (github.com/xkommando/Gplume). | | |