

# Bowen Cai

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<b>Education</b>	<b>Master of Science in Computer Science</b> , Texas A&M University, U.S.A. GPA: 3.38, Advisor: Dr. Jeff Huang.	Jan 2016 – Dec 2017
	<b>Exchange student</b> at Delft University of Technology, the Netherlands.	Oct 2014 – Mar 2015
	<b>B.E. in Software Engineering</b> . Northwestern Polytechnical University, P.R. China GPA: 84/100, top 10%.	Sep 2011 – Jun 2015
<b>Skills</b>	Proficient in <b>Scala, C++</b> , good at <b>Python, C#</b> . Work experience with <b>MySQL, Java EE</b> , and <b>HTML5</b> . Experience in <b>LLVM</b> (research projects), <b>GTest, TestNG, cryptography, network programming</b> . Basic Client-side develop skills with <b>Qt, Swing, Android</b> . Good communication skills.	
<b>Experience</b>	Internship at <b>Alibaba-Inc</b> , server-side Java developer.	
	<ul style="list-style-type: none"><li>Improved Wangqi 2.0, added new interfaces.</li><li>In WangXin 3.0 project, I implemented commenting and voting functions, designed and implemented admin console.</li><li>Got return offer after internship.</li></ul>	July – Oct 2014
	Internship at <b>Zhuoyuan Information Technology</b> , front-end developer. Presented and synced form data using ExtJS and Spring framework.	Jul – Aug 2013
	<b>RoboCup 3D Simulation Team</b> , developer. Developed robot player's movement function to improve its speed and stability.	Aug – Dec 2012
<b>Projects</b>	<ul style="list-style-type: none"><li>Research in Program Analysis and Concurrent Bug Detection:<ol style="list-style-type: none"><li>Shiyou Huang, <b>Bowen Cai</b>, Jeff Huang. Towards Production-Run Heisenbugs Reproduction on Commercial Hardware. USENIX ATC2017. I implemented Ball-Larus path profiling in LLVM and tested it on several large programs.</li><li><b>Bowen Cai</b>. Code Parallelization through Sequential Code Search. Student Research Competition, ICSE 2016. I implemented a prototype code search engine.</li><li>Implemented and tested a new redundant event filter for ThreadSanitizer.</li><li>Developed a use-after-free detector for multi-threaded programs on LLVM.</li></ol></li><li>Advanced Compiler Design class: developed several code optimization algorithms</li><li>CodeSniffer: I improved Decard, a tree-based code clone detector and developed a fast and accurate code similarity search engine in Scala.</li><li>PRMA: program runtime monitor and analyze, it is a distributed logging backend server for monitoring application servers and bug localization, implemented in Scala with AKKA.</li><li>Slingshot: A simple functional language implemented in C#.</li><li>eBay-like online C2C (Spring 2014): As the leader of a 13-men team, developed a complete online C2C shopping website, including searching, transaction, advertising, and admin consoles for seller/buyer.</li><li>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.</li></ul>	