Zuyu ZHANG **Resume**

zuyu@cs.wisc.edu
https://www.cs.wisc.edu/∼zuyu
https://github.com/zuyu

EDUCATION	**Ph.D. Candidate, Database Systems**	2012-2017 (Expected)
	University of Wisconsin-Madison, Madison, WI, USA	
	Advisor: **Prof. Jignesh Patel**	
	Thesis topic: Towards high perf., cloud-based distributed analytical query processing.	
	M.Eng., Computer Systems Organization	2010-2012
	Harbin Engineering University (HEU), Harbin, China	
	B.Eng., Computer Science and Technology	2006-2010
	Harbin Institute of Technology (HIT), Harbin, China	

TECHNICAL SKILLS
Prog. Lang.: C/C++, BASH scripting, and X86 AT&T Assembly.
Tools: YARN, HDFS, Mesos, LLVM, gTest, gLog, gRPC, CMake, Protobuf, and GIT.

EXPERIENCE

Software Engineering Intern, Twitter — May-Aug 2014, Jul-Sep 2016
- Prototyped the first Mesos scheduler in C++ using the low level APIs for **Twitter Heron**, with Write-Ahead-Logs (WAL) in Zookeeper.

Intern, Apache Quickstep Committer, Pivotal — Jun 2015-Jul 2016
- Research and develop distributed analytical SQL query processing techniques in **Apache Quickstep**.
- Added gRPC based async data exchange operation.

Research Assistant, UW-Madison — 2013-present
- Replaced JSON with Protobuf to serialize catalog and run-time data structures for query execution, including QueryContext.
- Added date types and operations to support TPC-H queries.
- Introduced FileManager to support multiple persistent storage, including HDFS.
- Extending **Quickstep** towards a distributed database on YARN and HDFS.

LLVM Back-end Porting for C*Core Architecture, HEU — Sep 2011-Jul 2012
- Designed selection patterns for 70 (out of 100) assemble instructions.

Research Internship, INRIA-Tsinghua, Beijing — Nov 2010-May 2011
- Proposed a **macro-block** based JIT code generation technique to speedup the **SimSoC** simulator.
- Accelerated 35% in average, and achieved 95 MIPS with peeks at 125 MIPS.

EXTRA-	**President**, ACM Student Chapter, UW-Madison	2013-2015
CURRICULARS	**Member**, Hoofer Sailing Club, UW-Madison	2013-present

INTERESTS
Sailing, clarinet, and travel (6 countries).