Zuyu (Anthony) Zhang

Curriculum Vitae

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EDUCATION

Ph.D. Candidate, Database Systems 2012-present
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
Thesis: LLVM based Back-end Porting for C*Core

B.Eng., Computer Science and Technology 2006-2010
Harbin Institute of Technology (HIT), Harbin, China

TECHNICAL SKILLS

Prog. Lang.: C/C++, BASH scripting, X86 AT&T Assembly, and VHDL.
Tools: YARN, HDFS, Mesos, LLVM, Zookeeper, gTest, gLog, gFlags, cmake, Protobuf, Thrift, GIT, SVN, LaTeX, and TiKZ.

EXPERIENCE

Software Engineering Intern, Pivotal Jun 2015-present
- Research and develop distributed analytical SQL query processing techniques.

Research Assistant, UW-Madison 2013-present
- Extending **Quickstep** towards a distributed database on YARN and HDFS.

Core Team Member, Quickstep Technolgoies Jan-Jun 2015
- Spinoff from the **Quickstep** big data project at UW-Madison, and acquired by Pivotal.

Software Engineering Intern, Twitter May-Aug 2014
- Prototyped the first Mesos scheduler in C++ using the low level APIs for the next generation Storm, with Write-Ahead-Logs (WAL) in Zookeeper.
- Derived the Mesos Executor with automatic failover for any internal failures.
- Demonstrated the scheduler running on a Mesos cluster of 150 nodes.

LLVM Back-end Porting for C*Core Architecture, HEU Sep 2011-Jul 2012
- Devised DAG lowering operations and transformations from LLVM IR.
- Designed selection patterns for 70 insns (totally 100) and optimization passes.
- Produced function prologue/epilogue.

Research Internship, INRIA-Tsinghua, Beijing Nov 2010-May 2011
- Proposed a compiler-assisted approach to speedup the **SimSoC** simulator using LLVM Just-In-Time (JIT) engine.
- Exploited a **macro-block**-based Dynamic Binary Translation (DBT) technique.
- Accelerated 35% in average, and achieved 95 MIPS with peeks at 125 MIPS.

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

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