ZHENGRONG WANG

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EDUCATION

University of California, Los Angeles, *Department of Computer Science* — Los Angeles, U.S.
Master of Science in Computer Science — *Sep. 2016 - Jul. 2018*(expected)

Tsinghua University, *Department of Electronic Engineering* — Beijing, P.R. China
Bachlor of Engineering in Electronic Engineering — *Aug. 2012 - Jul. 2016*
GPA: 91/100

ETH Zürich, *Department of Information Technology* — Zürich, Switzerland
Exchange Student, International Academic Program — *Sept. 2014 - Feb. 2015*
GPA: 5.50/6.00

PROFESSIONAL & PERSONAL SKILLS

Mathematic: Familiar with calculus, linear algebra, probability theory, discrete mathematics, algorithms.
Computer Capability: Skilled at C/C++; Proficient in C#, Python, MATLAB, Scala.
Coursera Specialization: Functional Programming in Scala from EPFL.
Language Proficiency: English: Toefl 114; German: B1 Level(MCER).

SELECTED PROJECTS & INTERNSHIPS

Yart-cpp, yet another ray tracer in C++ — *Sep. 2015 - Present*

- Implement direct lighting and bidirectional path tracing.
- Lambertian, specular, refraction and Cook-Torrance BRDF are supported.
- Use OC-Tree to accelerate complex mesh.
- Repo: https://github.com/seanzw/yart-cpp

Light C-Compiler in C# — *Dec. 2015 - Present*

- Support C99 standard and generate x86 assembly.
- Handwritten regular expression, NFA scanner generator and parser combinator library.
- Scanner generated by handwritten scanner generator.
- Parser generated by handwritten parser combinator library.
- Semantic analysis that checks types and symbols;
- Code generation to x86 assembly on Windows (can be directly used by clang assembler)
- Repo: https://github.com/seanzw/lcc

OpenCL@FPGA (Undergraduate Thesis) — *Sep. 2015 - Jun. 2016*

- Supervised by Assoc. Prof. Fei Qiao, Tsinghua University.
- Use OpenCL to implement CNN on Xilinx Alpha Data FPGA, and accelerate with pipeline.
- Paper on TENCON 16: Optimizing Convolutional Neural Network on FPGA under Heterogeneous Computing Framework with OpenCL

BruinBase, Course Project of UCLA CS143 Database Systems — *Sep. 2016 - Oct. 2016*

- Implement B+ tree indexing for key-value database system.
- Support SQL LOAD, INSERT, SELECT, WHERE clauses.
- Efficient query by narrowing down key range first using WHERE clause.

JOS, Course Project of MIT 6.828 Operating System Engineering — *Jul. 2015 - Sep. 2015*

- Implement a tiny unix-like OS.
- Handle virtual memory, system call, user environments, multi-tasking, file systems, network, etc.

AWARDS AND HONORS

Second-class Scholarship for Excellent Freshmen, *Tsinghua University* *Oct. 2012*

Wang Zhaosheng Scholarship for Excellent Studeng from Dongguan, *Wang Zhaosheng Fundation* *Oct. 2012*

Second Prize in 30^{th} Chinese National Physics Contest(non-physical group A) *Dec. 2013*

Ranked No.5 in National Matriculation Test(Science), Guangdong Province (5/600,000) *Jun. 2012*

PUBLICATION

Z. Wang, F. Qiao, Z. Liu, Y. Shan, X. Zhou, L. Luo, and H. Zhong. Optimizing Convolutional Neural Network on FPGA under Heterogeneous Computing Framework with OpenCL. In *TENCON 2016 IEEE Region 10 Conference*.

EXPERIENCE

Courses in CS

- Compilers by Alex Aiken, Stanford University
- Operating System Engineering, MIT
- Programming Languages by Dan Grossman, University of Washington
- Machine Learning by Andrew Ng, Stanford University
- Algorithms Part I & II by Robert Sedgewick, Princeton University
- Introduction to Computer Science and Programming, MIT
- Introduction to Probability, MIT
- Advanced Computer Graphics, Tsinghua University
- Computer Networks, Tsinghua University
- Software Engineering, Tsinghua University
- Computer Graphics (5.25/6), ETH Zurich
- Computer Vision (5.5/6), ETH Zurich

Children Education Program Volunteer, *Dream a Dream, Bangalore, India* *Jul. 2013 - Sept. 2013*