Shuai Yuan

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Education

- Master in Computer Science, National Tsing Hua University, Taiwan, 2014.
- Bachelor in Computer Science and Technology, Zhejiang University, China, 2012.

Honor and Awards

- Scholarship:
  - Second prize of outstanding student scholarship and scholarship for academic, 2008–2009
  - Third prize of outstanding student scholarship and scholarship for academic, 2009–2010
  - Second prize of outstanding student scholarship and scholarship for academic, 2010–2011
  - Hong Hai/Foxconn scholarship, 2012–2013
- Honor: outstanding student, 2008–2009, 2009–2010, 2010–2011
- Awards:
  - Second prize of Zhejiang Province Calculus Contest, 2009
  - Third prize of Zhejiang University ACM Programming Contest, 2009
  - Second prize of Zhejiang University-Intel Embedded Online Contest, 2010
  - Outstanding thesis paper among undergraduate stundents, 2012

Current Research Fields

Cloud Computing, Storage System, Erasure Codes

Research Experiences

- Lab member of Large-scale System Architecture (LSA) Lab, National Tsing Hua University, 2012–Current
- Research intern in LRI (Laboratoire de Recherche en Informatique) of the University of Paris XI, France, 2011,10–2012,4
  - Work on “automated constraint verification for databases” under the guidance of Prof.Véronique Benzaken and Prof. Évelyne Contejean.

  - Based on the observation that currently no real database management system (DBMS) have fully support the management of integrity constraints and run-time checking is time-consuming, we have present a compile-time verification strategy based on the weakest precondition and predicate transformer approaches.

- Lab member of Microsoft Visual Perception Laboratory of Zhejiang University, 2010–2012
  - Work on "scene audio recognition of images" under the supervison of Prof. Mingli Song.

Project Experiences

- GPU-RS: a GPGPU approach to accelerating Reed-Solomon codes for fault-Tolerance in RAID-like system.
  - Written in CUDA C. Source code and documents are available under GPLv3: `https://github.com/yszheda/GPU-RSCode`.
  - Achieve a maximum speed-up of approximately 90 over the performance of traditional CPU-based Reed-Solomon Codes.
- assertion-verification: implementation of the thesis "automated constraint verification for databases".
  - Written in Ocamllex and Ocamlyacc. Source code is available on Github: `https://github.com/yszheda/assertion-verification`.
- regex-engine: a Boost::regex based engine that supports regular expression matching, searching and replacement.
  - This project was part of the Student Research Train Program (SRTP) of Zhejiang University in 2010, and was awarded as outstanding SRTP.
  - My role: a team leader and a programmer.
  - Written in C++. Source code and executable files are available on Google Code: `(http://code.google.com/p/regex-engine/)`

For more projects, please refer to my profile on:

- Github: `http://github.com/yszheda`
- Google code: `https://code.google.com/u/yszheda@gmail.com/`

Skills

- Programming Language: C, C++, Java, Matlab/Octave, Verilog HDL, Shell script(mainly bash), Ocaml.
- Framework/API: Hadoop, CUDA, MPI, OpenGL, etc.
- Operating System: GNU/Linux (Currently an ArchLinux user), Windows.
- Version Control Tools: git, svn, cvs.
- IDE: Eclipse, Visual Studio, Xilinx ISE.
- Documentation: LaTeX