Shuai Yuan

Mobile game developer in Xinyoudi Studio, Leqee Company
Mobile: (86)13539623264
Email: yszheda@gmail.com
Personal Profile: http://yszheda.github.io
Blog: http://galoisplusplus.coding.me

Education

- Master in Computer Science, National Tsing Hua University, Taiwan, 2014 (GPA: 4.23/4.3).
- Bachelor in Computer Science and Technology, Zhejiang University, China, 2012 (GPA: 3.84/4.0).

Research Experiences

- Lab member of LSA (Large-scale System Architecture) Lab, National Tsing Hua University, 2012–2014: work in the field of Cloud Storage System, Erasure Codes and GPGPU under the supervision of Prof. Jerry Chou. I was the TA of the CUDA lab class in my supervisor's "Parallel Programming" course.
- 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.

Career Experiences

- Mobile game developer in Xinyoudi Studio, Leqee Company, 2014/7–current.
  - Join a startup team and develop a 2D mobile game (now available on `Google Play` and `App Store`).
  - As a leading client developer, I get my hands dirty on development using `cocos2d-x` and `quick-cocos2d-x`. Besides, I also take part in server development using `OpenResty`.
  - My main contributions include:
    * Trace errors and crash, work on fixing or workarounding upstream bug, some of the patches are accepted by quick-cocos2d-x (`PR#407`, `PR#438`, `PR#440`).
    * Customize UI widgets.
    * Write **Bash** or **Python** scripts for automate work flow, sorting and distribution of errors and crashes, server API press test, etc.
    * Develop multiple modules in our game.
    * Use **Docker** for quick deployment and scaling up.
    * Code review of our client source code.

Project Experiences

- GPU-RSCode: a GPGPU approach to accelerating Reed-Solomon codes for fault-tolerance in RAID-like system, 2012/12–2014/5.

  - Written in **CUDA C/C++**. Source code and documents are available under GPLv3: `https://github.com/yszheda/GPU-RSCode`
  - We present an optimized GPU implementation of Reed-Solomon Codes, which can achieve a speedup of 14.71 over the current best CPU implementation Jerasure.

- GPU-knn: Accelerate k Nearest Neighbor on GPU, 2012/9–2013/1.
  - Four submodules implemented using **CUDA**, **OpenCL**, **MPI**, and **pthread**. Support running on multiple GPUs in multiple nodes.
    `https://github.com/yszheda/GPU-knn`

- sim-outorder-extend: extensions for the `SimpleScalar` sim-outorder simulator, 2013/3–2013/5.
  - Implement Alpha 21264 dynamic branch predictor and four more cache replacement policies in **C**.
    `https://github.com/yszheda/sim-outorder-extend`

- assertion-verification: automated compile-time constraint verification for databases based on the weakest precondition and predicate transformer approaches, 2011/9–2012/3.
  - Written in **Ocamllex** and **Ocamlyacc**, use program verification platform `Why3`.
    `https://github.com/yszheda/assertion-verification`

I have made some contributions to the following open-source projects:

- Multi-platform game framework: `cocos2d-x` and `quick-cocos2d-x`.
- Octopress plugin: octopress-syncPost (`PR#8` & `PR#9`, one accepted).
- Utilities for nginx module development `openresty-devel-utils` (a simple patch `PR#9` for lua-releng, accepted).
- Python wrapper for extended file system attributes: `xattr` (a simple patch `PR#8`, accepted).

Skills

- Programming Language: **Lua**, **C**, **C++**, **Bash**, etc.
- Framework/API: **CUDA**, **MPI**, **cocos2d-x**, **quick-cocos2d-x**, **OpenResty**, etc.
- IDE/Programming Tools: **XCode**, **Eclipse**, etc. (I use **Vim** as an editor, use **automake** to build my own project, have experience with **gdb**, **valgrind**, **gprof**, **cuda-gdb**, **cuda-memcheck**, **nvprof**, **adb**, **ndk-stack**, etc.)
- Operating System: **GNU/Linux** (Ubuntu, Debian, now I'm using ArchLinux).
- Version Control Tools: **git**, svn (As a git fan, now I prefer **git-svn** instead XD).
- Documentation: LaTeX

Honor and Awards

- Honor:
  - outstanding employee in Leqee Company, 2014–2015.
  - outstanding student in Zhejiang University, 2008–2009, 2009–2010, 2010–2011.
- Scholarship:
  - Hong Hai/Foxconn scholarship, 2012–2013.
  - Second prize of outstanding student scholarship and scholarship for academic, 2010–2011.
  - Third prize of outstanding student scholarship and scholarship for academic, 2009–2010.
  - Second prize of outstanding student scholarship and scholarship for academic, 2008–2009.
- Awards:
  - Outstanding thesis paper among undergraduate stundents, 2012.
  - Second prize of Zhejiang University-Intel Embedded Online Contest, 2010.
  - Third prize of Zhejiang University ACM Programming Contest, 2009.
  - Second prize of Zhejiang Province Calculus Contest, 2009.

Interests

- violin, Classical music, badminton, hiking, table tennis