# Shuai Yuan

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## 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).

## 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.

## Career Experiences

- Frontend mobile game developer in Xinyoudi Studio, Leqee Company, 2014/7–current.
  - Join a startup team and develop a 2D game (now available on `Google Play` and `App Store`).
  - Get my hands dirty on frontend development using `cocos2d-x` and `quick-cocos2d-x`.
  - 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`).
    * Customize UI widgets, some of them are available on Github: GridView, irregular button, and `quickx-extensions`.
    * Improve frontend UI workflow for better performance.
    * Multiple modules.

## 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.
- 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`. Source code is available on Github: `https://github.com/yszheda/assertion-verification`

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

- `quick-cocos2d-x`.
- octopress plugin: octopress-syncPost (`PR#8` & `PR#9`, one accepted).
- Python wrapper for extended filesystem attributes: `xattr` (a simple patch `PR#8`, accepted).

## Research Experiences

- Lab member of Large-scale System Architecture (LSA) Lab, National Tsing Hua University, 2012–2014.
  - Work on "Accelerate Reed-Solomon Codes on GPUs" under the supervison of Prof. Jerry Chou.
- 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.
- 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.

## Skills

- Programming Language: C, C++, Lua, Matlab/Octave, Verilog HDL, script(mainly bash), etc.
- Framework/API: cocos2d-x, quick-cocos2d-x, CUDA, MPI, etc.
- Operating System: GNU/Linux (proudly using ArchLinux), Windows.
- Version Control Tools: git, svn (As a git fan, now I use git-svn instead XD).
- Documentation: LaTeX