CONG LIU

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SUMMARY

Passionate, determined and fast-learning engineer, with a strong understanding of object-oriented design principles, algorithms and data structures. Big fan of Android application development with one app published at Google Play. High motivation to create cool and innovative stuff with a strong adaptability to new technologies.

EDUCATION

M.S in Electrical & Computer Engineering, 2012.9-2014.9
University of Alberta, Edmonton, AB, Canada GPA: 3.9/4.0

B.E in Automation, 2008.8-2012.7
Tsinghua University, Beijing, China GPA: 3.9/4.0

SKILLS

- Proficient in Java, Android SDK, C++ and SQL
- Familiar with Eclipse, Visual Studio, Git
- Experience with Spring, Firebase, Bootstrap, jQuery
- Basic knowledge of Java servlet, JSON, HTML, CSS, Javascript

EXPERIENCE

Research Assistant
University of Alberta, Edmonton , AB, Canada 2012.9-2014.9

- Proposed several approximate arithmetic designs and performed image processing using Java/Matlab, showing equivalent quality to conventional designs however with 80% power saving
- Extensively researched open-source hand gesture recognition projects and extended these projects to support real-time recognition with significantly improved robustness using Open CV/Emgu CV

Software Developer
Tsinghua Future Communication Program, Beijing, China 2010.10-2012.2

- Designed augmented reality algorithms for an Android App "Hello World", winning **global 2nd** among 185 competitors in Ericsson Application Awards 2011

PROJECTS

Butterfly Hunter – https://**play.google.com**/store/apps/details?id=com.butterflyHunter

- This is an Android game app which features the "Augmented Reality" technology. It creates virtual butterflies on top of the camera view of a smart phone and detects user location for "catching" the butterflies. The game thoroughly uses smart phone sensors and Android Canvas painting.

Jogging Notes – https://**github**.com/waterwoodsthu/Jogging-Notebook.git

- This app uses Firebase to maintain jogging data and provides real-time data analysis and report. The data can be manually input by the user or automatically generated by tracking GPS data of the phone. It also supports multiple login options (Facebook/Google/Twitter and new user registration).

Hyper Queue – https://**github**.com/waterwoodsthu/HyperQueue.git

- This is a demo implementation of Producer/Consumer problem. The Broker model is implemented on top of a Tomcat server and it handles asynchronized requests from the Producer and Consumer, which are implemented as web clients.

PUBLICATIONS

[1] Cong Liu, Jie Han and Fabrizio Lombardi, "An Analytical Framework for Evaluating the Error Characteristics of Approximate Adders," *IEEE Transactions on Computers*, 2014.

[2] Cong Liu, Jie Han and Fabrizio Lombardi, "A Low-Power, High-Performance Approximate Multiplier with Configurable Partial Error Recovery," *DATE 2014*, Dresden, Germany.