Shi Shi
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RESEARCH INTERESTS

Parallel computing, algorithms and architecture, programming models, computer systems and application development.

EDUCATION

Fudan University Shanghai, China
Department of Microelectronics 2015-2019
B.E., Microelectronic Science and Engineering, with honored thesis, June 2019
Department of Economics 2016-2018
Minor in Economics, June 2019

RESEARCH & TEACHING

Fudan University Shanghai, China
Research Assistant, Department of Microelectronics September 2016-March 2018
Supervised by Professor Patrick Yin Chiang. Responsible for the software design of a 3D sensing system. Implemented pipeline control flow and parallel computing software. Generated real-time Unity 3D demos and multithread PyQt GUI.

Teaching Assistant, Department of Computer Science March-July 2018
Helped students implement monocycle, multicycle and pipeline MIPS CPUs on virtual platforms in the course *Introduction to Computer Systems*.

INTERNSHIP

IBM CSL Shanghai, China
Software Engineer July-October 2018
Built software testbenches for IBM OpenCAPI interface in OpenPower Enablement group. Reverse engineered opensource compilers. Implemented parallel computing software on different physical and virtual platforms.

IBM CDL Shanghai, China
Software Engineer December 2017-April 2018
Designed autonomous software system for voice recognition and object detecting and tracking in IBM University Student Innovation Lab Program.

PhotonIC Technologies (Shanghai) Co., Ltd. Shanghai, China
Software Engineer August 2017-March 2019
Developed front-end Android app featuring external camera, PMD 3D camera via JNI, user canvas and network service, and back-end WCF + MSSQL database service.

AWARDS & HONORS

The Third Prize Scholarship, Fudan University, 2019
Best Intern & Best Project with official LinkedIn badge, IBM Extreme Blue Program 2018
IBM Enterprise Award, HackxFDU, November 2017
1st Runner-up, iShamrock Software Competition, March 2017

PUBLICATIONS

Shi Shi, Lei Wang, Matthew Johnston, Azmeen Ur Rahman, Gurjeet Singh, Youmin Wang, and Patrick Yin Chiang. "Pathway to a compact, fast, and low-cost LiDAR." In *2018 4th International Conference on Control, Automation and Robotics (ICCAR)*, pp. 232-236. IEEE, 2018.

Gurjeet Singh, Sun Miao, **Shi Shi**, and Patrick Chiang. "FotonNet: A HW-Efficient Object Detection System Using 3D-Depth Segmentation and 2D-DNN Classifier." arXiv preprint arXiv:1811.07493 (2018).

Shi Shi. "FusionAccel: A General Re-configurable Deep Learning Inference Accelerator on FPGA for Convolutional Neural Networks." arXiv preprint arXiv:1907.02217 (2019).

OTHER PROJECTS

Reverse Engineering & C++/Game Developing Shanghai, China
Software Engineer May 2018
Implemented Quine-McClusky algorithm & Petrick's method in C++ for logic simplification. Reverse engineered a published game called *The Binding of Isaac* and realized it in cross-platforms with Cocos2dx engine.

SKILLS

Programming Language: C, C++, Verilog, SystemVerilog, MATLAB, Python, Arduino, shell.
Platforms: FPGA, Qt, Android, GUI, Unity3D (C#).
Media: Sketch, SketchUp, Photoshop, Premiere Pro, After Effects, Illustrator, Rhino3d.