LIU ZIHAN (Altair)

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Personal Site: http://subjectnoi.github.io/about/

Education

2015.09-2019.06　　　　　**Bachelor, Department of Computer Science, East China Normal University**

- GPA: 3.81/4.00, Rank: 5/116, scholarship in 2018/2019. Awards in MCM, programme contest, etc.

2019.09-Now　　　　　**Master, Department of Computer Science, Shanghai Jiao Tong University**

- ReArch Lab, researching on AI chip architecture and optimization, neural networks frameworks and compiler.

Job

2018.08-2019.01　　　　　**IBSO Cloud Development, SAP (Intern)**

- Developing cloud application deployed on **Cloud Foundry** based on **Java** and corresponding tools (**Spring, OData, MongoDB**), project is constructed by **Maven**, version control by **git** and **Jenkins**.

- Developing **S/4 HANA** application deployed on **Cloud Foundry** based on **Java**, **SAPUI5**, and doing related unit and integrate test based on **karma**, **QUnit** and **Opa5**.

2019.01-2019.06　　　　　**GPU SM Arch, NVIDIA (Intern)**

- Developing modelling tool for software level stimulation and verification on functionality and performance on next generation GPU circuit (Ampere and Hopper Architecture). Project is based on **C/C++/CUDA**, **PTX** (IR in middle level), **SASS** (micro-instruction on hardware), and a little bit **Verilog HDL**. I mainly worked on logic of new instruction UMMA. Project is constructed by **cmake**, version control by **Perforce**.

Project Experience

- Research and optimize ONNX back-end on AI inference chip Cambricon MLU100.

- Simplified C-like compiler using Lex, Yacc and LLVM. Taking part in the translation of compiler related cookbook.

- Research the new architecture (Turing and Volta with Tensor Core) and optimize the performance of various ML apps on GPU as bachelor graduate project, and use GPGPU-SIM to adjust the existing architecture (to systolic array like TPU).

- In bachelor stage, there are various cource projects including the using of various ML algorithm (NSGA-II, MOEA/D, Gaussian Process, HMM/CRF, DBSCAN, NNs including C-LSTM, WGAN-GP, etc.), various tools (Unreal Engine 4 for a 3-D action game), etc.

Skills

C/C++/CUDA, ACM/ML/DL Algorithm and Data Structure, Linux, LaTeX, Python, Java, SQL/MongoDB, Unreal Engine 4, Verilog HDL.