

LIU ZIHAN (Altair)

altair.liu@sjtu.edu.cn, +86 159 0215 7531

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**, **JUnit** and **Protractor**.

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 AI inference chip Cambricon MLU100 combined with Open Neural Network eXchange (ONNX).
- Simplified C-like compiler using Lex, Yacc and LLVM. Take part in the translate of *Getting start with LLVM core libraries*.
- 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 course 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.