Personal Particular

Name:	Ming-Yi Lai (Melson Lai)
Gender:	Male
Date of Birth:	1997/08/18
Nationality:	Taiwan
Conscription Status:	Served
Language:	Mandarin, English (TOEFL iBT 104)

Programming Skill

Programming Languages:	C/C++, Bash Script, Python
Development Tools:	GNU Linux, Docker, GDB

Contact Information

Email: ming-yi.lai [at] mymlai.com

Education

M.Eng in Computer Science **2019/07-2021/07**
National Tsing Hua University Hsinchu, Taiwan
- **+** Thesis: Accelerate Mobile Machine Learning Inferences with Combination of Machine Learning Runtimes
- **+** Advisor: Prof. Jenq-Kuen Lee

B.Eng in Computer Science **2015/09-2019/06**
National Tsing Hua University Hsinchu, Taiwan

Senior High School **2012/09-2015/06**
Tainan First Senior High School Tainan, Taiwan

Work Experience

MediaTek **2023/10-**
RISC-V Toolchain Engineer Hsinchu, Taiwan
- **+** Support RISC-V Zicfilp ISA extension in toolchain (LLVM, Clang, LLD, musl libc, Spike)
- **++** Implement instruction generation in the LLVM/Clang compiler
- **++** Implement PLT generation and ELF metadata management in the LLVM/LLD linker
- **++** Implement runtime support in musl libc
- **++** Implement function-level instruction simulation in the RISC-V Spike simulator
- **++** Co-develop psABI specification with community members
- **++** Upstream select components to open source repositories
- **+** Support RISC-V Zicfiss ISA extension in the LLVM/libunwind stack unwinder

Synology **2021/09-2023/05**
Product Developer Taipei, Taiwan

+ Design highly efficient software systems using multithread & multiprocess in C++
+ Develop customized file systems using the VFS layer in Linux kernel
+ Deliver cloud backend services with Go, gRPC, Redis, TiDB, etc.

PeakHills Group **2021/04-2021/08**
Engineer Hsinchu, Taiwan
+ Customize TVM AI compiler & runtime
+ Add VeriSilicon TIM-VX support to TVM

MediaTek **2020/07-2020/08**
Intern Engineer Hsinchu, Taiwan
+ Enable MLIR codegen for TVM utilizing Tensor IR

Research and Project

Enabling Android NNAPI Flow for TVM Runtime **2020/08**
Ming-Yi Lai, Chia-Yu Sung, Jenq-Kuen Lee, and Ming-Yu Hung (Virtual Conference)
+ Published in ICPP EMS 2020
+ Devise algorithm to partition machine learning models to TVM/NNAPI AI compiler & runtime
+ Convert TVM Relay IR to NNAPI equivalence

Deep Learning Cloud Service **2017/07-2018/07**
NTHU CS Bachelor Final Year Project Hsinchu, Taiwan
+ Use OpenStack Horizon (Django) to create a WebUI
+ Incorporate OpenStack Swift, PostgreSQL, Kubernetes and TensorFlow as backend to enable semi-automatic deep learning training and inference

Taiwan Student Cluster Competition **2017/03-09**
NTHU Delegation Member Hsinchu, Taiwan
+ Win the second prize with significant edge over other competitors
+ Compile hardware-specific distributed software
+ Automate competition process with Bash and Python scripts

School Experience

Teaching Assistant of Compiler Design **2021/03-2021/06**
2020/03-2020/06
National Tsing Hua University Hsinchu, Taiwan
+ Hands-on with Lex and Yacc

Study Abroad: Undergraduate Exchange **2018/08-2019/05**
Nanyang Technological University Singapore

Job Expectation / Preference

Preferred Location
Hsinchu, Taiwan