En-Tien Hu

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EDUCATION

Carnegie Mellon University Pittsburgh, PA
Master of Science in Electrical and Computer Engineering May 2021

- GPA: 3.78/4.0
- Coursework: Introduction to Computer Systems, Optimizing Compiler for Modern Architecture, Principles of Software Construction, Modern Computer Architecture and Design, Embedded System Software Engineering
- Coursework in progress: Web Application Development, Machine Learning, Computer Networks

National Tsing Hua University Hsinchu, Taiwan
Bachelor of Science in Electrical Engineering January 2019

- GPA: 4.09/4.3
- Coursework: Data Structure, Computer Architecture, Operating Systems, Embedded System Lab, Compiler Design, Advanced Computer Architecture, IC Design Lab

EXPERIENCE

Samsung Electronics, Samsung Research, On-Device AI Lab, NPU Team Seoul, Korea
Software Development Engineer Internship June 2020 – August 2020

- Played as a study role in a research group, analyzed the structure of TVM and made a seminar.
- Provided the insight to the TVM extension design for the processor that is used in the lab.
- Participated in Samsung Software Certificate Test and ranked in top 20%.
- The ability to adopting to different culture and communicating with foreign languages were proved

National Tsing Hua University, Dept. of Electrical Engineering Hsinchu, Taiwan
Teaching Assistant – Introduction to Programming September 2018 – January 2019

- Introduced environment and tools, Linux and VIM, to first year students.
- Designed 5 exercises about complex topics like String Operation, Dynamic Memory Allocation
- Arranged weekly TA sessions for 70 students to get familiar with C programming.

ACADEMIC PROJECTS

Carcassonne, A GUI Game Implementation with Java September 2020 – November 2020
Personal Project Carnegie Mellon University (Pittsburgh, PA)

- Analyzed and designed the program with the domain model, the system sequence diagram, the object-level interaction diagram and the object model.
- Applied observer pattern to separate the logic of the game system and the GUI implementation with Java Swing and template method pattern to reuse the code for the classes with similar concepts.
- Implemented unit tests with JUnit and static analyses with SpotBug and Checkstyle.
- Built continuous integration and continuous deployment with Gradle and Travis.

Data Visualization Framework Implementation with Java November 2020
Group Project in a Team of 3 Carnegie Mellon University (Pittsburgh, PA)

- Designed a black-box framework with interfaces for data plugins, display plugins and analysis plugins.
- Implemented the plugins for the existed frameworks from other groups.
- Used branches and pull requests on Git massively to collaborate with others on the group project.

Simple Parallel CPU Design November 2018 – January 2019
Group Project in a Team of 3 National Tsing Hua University (Hsinchu, Taiwan)

- Designed a Parallel CPU through Verilog, synthesis, P&R, and APR process.
- Applied Tomasulo algorithm, dynamic branch prediction, and data cache to make the CPU execute at most 4 instructions each cycle and achieve 90% branch prediction accuracy.

Simple C Compiler Design February 2018 – June 2018
Personal Project National Tsing Hua University (Hsinchu, Taiwan)

- Designed a C Compiler following part of C98 specifications to make the compiled instructions be able to work on Arduino board correctly.
- Implemented lexical analysis, parsing, and code generation with flex and yacc tools.

SKILLS

- **Software**: C, C++, Java, Python, Verilog
- **IC Design Flow**: RTL Design, Design Compiler, IC Compiler
- **Tools**: LLVM, Git, Gradle, Travis CI, SpotBug, Checkstyle
- **Languages:** Mandarin (Native Speaker), English (Fluent), Korean (TOPIK 6 Level)