

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

- Unpacked and traced the source code of TVM and made a seminar to team members.
- Analyzed the TVM extension design for the processor that is used in the lab.
- Participated in Software Certificate Test at Samsung Electronics.

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

Data Visualization Framework Implementation

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.

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 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.
- Used tools for build automation like Gradle and Travis CI.

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)