

# Lihsuan Chuang

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## EDUCATION

- **University of British Columbia** 09/2020 - 06/2024  
*Bachelor of Applied Science in Computer Engineering* Vancouver, Canada
- **University of North Carolina at Chapel Hill** 09/2024 - expected 06/2026  
*Master of Science in Computer Science* Chapel Hill, United States

## PUBLICATIONS

- **KeyTAR: Practical Keystroke Timing Attacks and Input Reconstruction** 09/2024 - 09/2025  
*Accepted to appear at IEEE S&P 2026* Chapel Hill, United States

## EXPERIENCES

- **IEEE Symposium on Security and Privacy 2026**  08/2025  
*External Reviewer* Oakland, United States
  - Reviewed submissions in microarchitectural security and side-channel attacks
  - Provided detailed feedback with regards to the paper's organization, scientific value, novelty, and technical correctness
- **University of North Carolina at Chapel Hill - Department of Computer Science**  09/2025 - present  
*Research Assistant, Advisor: Andrew Kwong* Chapel Hill, United States
  - Constructed a dataset collection system to replay typing samples and to collect side-channel traces
  - Implemented the classical keystroke timing side-channel attacks on both native and browser environments
  - Demonstrated the first input reconstruction from inter-keystroke timings
- **University of British Columbia - Department of Electrical and Computer Engineering**  09/2022 - 06/2024  
*Teaching Assistant (APSC 160, CPEN 211, CPEN 212)* Vancouver, Canada
  - Graded student coursework and exams to support instructor's course management
  - Led tutorial sessions that emphasized core concepts and addressed student's inquiries
  - Collaborated with instructors and other colleagues in discussions to improve overall course delivery
- **University of British Columbia - Student Housing and Community Services**  09/2022 - 06/2024  
*Residence Advisor* Vancouver, Canada
  - Collaborated with colleagues to organize monthly community events
  - Performed daily patrol duties to ensure safety and functional facilities
  - Stationed on-call with the duty-phone to respond to emergencies
  - Documented situations in detail for superiors to take further actions when necessary
- **UBC Thunderbots**  09/2021 - 06/2024  
*Software Engineer* Vancouver, Canada
  - Supported the integration of a realistic game simulator that simulates Newtonian physics effect
  - Developed comprehensive test suites to validate the effectiveness of existing tactics
  - Implemented an algorithm for detecting robot malfunctioning and substituting robots
- **iNet Internship** 06/2021 - 08/2021  
*Web Developer* Taipei, Taiwan
  - Designed an interactive webpage integrating popular third-party widgets
  - Performed comprehensive testing on webpages to invoke potential bugs from unexpected user behavior

## EXTRACURRICULAR EXPERIENCES

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- **UBC New Taiwanese Generation Club** [🌐]

*Event Coordinator*

09/2022 - 06/2023

Vancouver, Canada

- Organized and hosted a series of engaging cultural events to promote the Taiwanese culture
- Developed inter and intra-team communication skills to accurately convey event ideas

- **University of British Columbia - First Year Experience** [🌐]

*Jump Start Orientation Leader*

09/2021 - 06/2024

Vancouver, Canada

- Facilitated a series of engaging events and icebreaker activities,
- Assisted students with their transition into university and a new environment
- Supported other first-year-experience staff members in hosting optional interactive activities

## PROJECTS

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- **RISC Computer**

*Tools: DE1-SOC & Verilog*

01/2021-05/2021



- Implemented a RISC architecture capable of executing a limited set of encoded ARM v7 instructions
- Designed the ALU, registers, datapath, and memory using state-of-the-art HDL

- **SDMS: Smart Doorbell System**

*Tools: Verilog, Lua, Flutter, AWS Server*

01/2022-05/2022



- Implemented a range of features on externally connected touchscreen with embedded system software
- Integrated hardware, mobile application, and cloud server for a smart doorbell
- Communicated effectively with colleagues to establish a common protocol for integration

- **HistoData: Automated Trading System and Visualization Tool**

*Tools: Visual Studio C#, ReactJS, Python, NodeJS, SQL, Interactive Broker API*

09/2023-06/2024



- Implemented a RISC architecture capable of executing a limited set of encoded ARM v7 instructions
- Designed the ALU, registers, datapath, and memory using state-of-the-art HDL

## SKILLS

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- **Programming Languages:** C, C++, Java, Python, R, Matlab, Verilog, Unix, Javascript, Html, CSS
- **Languages:** Mandarin Chinese (Native), English (Native), Japanese (Conversational), French (Intermediate)
- **Other Skills:** Powerpoint, Excel, Word, Latex, Markdown

## CERTIFICATIONS

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- **Japanese Language Proficiency Test N2**

12/2024