

# CHIH-CHENG YUAN

chihchengyuan@gmail.com

## EDUCATION

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**National Taiwan Normal University**

2014 - 2019

*B.S. in Computer Science and Information Engineering*

## EXPERIENCE

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**Institute of Information Science, Academia Sinica**

2019 - Present

*Research Assistant*

- Developed bit-level hardware verification safety algorithm based on algorithmic boolean learning and interpolation.
- implemented AIG input parser, C++ minisat API, and custom profiling and logging.
- Worked on algorithmic learning such as order-theoretical version space learning, automata  $L^*$  regular language learning, and monotone-theoretical CDNF boolean function learning.
- Worked on formal methods such as syntax-guided program synthesis, counterexample-guided abstraction refinement, and bounded temporal unrolling.
- Worked on logical theories such as propositional Craig interpolation, boolean theory, and boolean analysis.

**Institute of Information Science, Academia Sinica**

2017 – 2019

*Adjunct Research Assistant*

- SAT-solving reduction of poset cover problem for message sequence chart synthesis implemented in Python with z3.
- NP-hardness of k-anonymity checking problem and a randomized approach thereof for the 2010 Taiwanese census data implemented in Python with MySQL.
- Worked on connection between order theory and language theory, proving that between permuted linearizations and Myhill-Nerode theorem.
- Worked on de-identification techniques such as  $\ell$ -diversity,  $t$ -closeness, and  $\delta$ -presence.
- Worked on differential privacy framework in Pufferfish.
- Worked on probabilistic programming in WebPPL.

**Inside.com.tw**

2016

*Software Engineering Intern*

- Backend Wordpress theme development; collaboration and communication with frontend team.
- In-house editor user-interface feature requests for editorial team.

**Inside.com.tw**

2015

*Editorial Intern*

- Coverage, interviewing, and reporting on technology and startup related scenes.

## AWARDS & CERTIFICATES

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**Academic Excellence Award**

2016

*Ranked top 5% in a class*

**TOEFL iBT**

2016

*Score: 108 (Reading: 29 / Listening: 30 / Speaking: 22 / Writing: 27)*

**TOEIC**

2013

*Score: 960*