

## PROGRAMMING SKILLS

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**Languages:** C/C++, Python, Haskell, Agda

## EDUCATION

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### National Taiwan University

Taipei, Taiwan

*Bachelor, double major in Computer Science and Math*

*Sep 2019 – June 2023(Anticipate)*

## EXPERIENCE

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- **Algorithm Design and analysis, NTU** Taipei, Taiwan  
*Teaching Assistant* *Sep 2022 - Dec 2022*  
This is the required algorithm course in National Taiwan University's computer science department. Over 300 students took the course in 2022. My duties include designing/correcting hand-written homework and answering student questions.
- **Institute of Information Science, Academia Sinica** Taipei, Taiwan  
*Internship, Advisor: Prof. Shin-Cheng Mu* *July 2022 - Aug 2022*
  - **Free theorem:**  
Free theorem (Theorems for free!) is an important theorem in programming language theory, which demonstrate the restriction and capability of polymorphic function. I read and presented this paper together with some application to my peers in group meeting.
  - **Side effect interaction:**  
Anything a function does, except than returning result is side effect. There are multiple ways to model side effect in functional programming, the two mainstream ways are monad and effect handler. Recently, people put focus on a special class of effect, called algebraic effect. How them can be modeled as modular effect handler and how multiple effect interact with each other under this model. I did some study about this area, presented to advisor and peers.
- **Frontiers of science summer camp - Quantum Computing** Online  
*Teaching Assistant* *July 2021*  
A two week summer camp for undergraduate/graduate students, introducing the mathematical model for quantum computer and import algorithms such as Shor's algorithm. Over 80 students participated in this event. I was responsible for answering student questions.
- **APCS camp** Online  
*Staff* *Aug 2021*  
APCS camp aims to help high school students equip with knowledge required for APCS test. I helped the team prepare exercises used in class and homework.
- **SCMS** Taichung, Taiwan  
*Lecturer* *July 2020*  
This camp is for those who are interested in international Olympic. I delivered a lecture in advanced DP technique and greedy algorithm.