

Kuo, Nai-En

<https://imgradually.github.io/>

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EDUCATION

- **University of California, San Diego** La Jolla, CA
Master of Science in Computer Science and Engineering; GPA: 4.0/4.0 Sept. 2023 – Jun. 2025
- **National Yang Ming Chiao Tung University** Hsinchu, Taiwan
Graduate study in Network Engineering; GPA: 4.25/4.3 (Credit: 21) Feb. 2021 – July. 2022
- **National Chiao Tung University** Hsinchu, Taiwan
Bachelor of Science in Computer Science; GPA: 3.67/4.3 (Credit: 138) Sept. 2017 – Jan. 2021

EXPERIENCE

- **Taiwan Semiconductor Manufacturing Company(TSMC)** Hsinchu, Taiwan
Software Engineer Intern July 4, 2022 - Sept. 2, 2022
 - **System Migration:** I helped migrate an system from virtual machine to **Kubernetes**-based system OKD.
 - **Job Dispatching Solution:** I developed a job dispatching service using **Java Spring Boot** with unit test that successfully handle some time consuming bottleneck in production environment.
- **DBS Bank, Taiwan** Taipei, Taiwan
Software Engineer Contractor July 2020 - Jan. 2021
 - **Real-time speech emotion recognition:** Proof-of-concept implementation of transfer learning using **Pytorch**
 - **Talent Data Collector:** Web-based talent data collector and report generator using **Selenium** and **Pandas**.
 - **Phone dialing Line Chatbot:** A **Flask** web application that was built on **Heroku** with **PostgreSQL** database that helps you make a instant phone call through **Twilio** on a widely used instant messaging app **Line**.

COMPETITIONS

- **2021 Microsoft x TSMC IT CareerHack** Online
*In 24 hours, we made a **mixed reality** cooking simulator on **HoloLens** with **Unity**: Github repo* Jan. 24-25, 2021
- **2020 ICPC Asia Taipei-Hsinchu Site Programming Contest** Taipei, Taiwan
Bronze medal, Team name: NCTU-KokushiMusou, my ICPCID: C300DHLH34B2 Nov. 07, 2020
- **2020 Mei-Chu Hackthon** Hsinchu, Taiwan
3rd place. In 24 hours, we made a tweet sharing web application based on LIFF. : Github repo Oct. 24-25, 2020

PROJECTS

- **Recommender System:** Implementation of Bayesian Personalized Ranking and Latent-factor Model using Keras.
- **Haskell Snake Game:** A double player snake game based on functional programming language **Haskell**.
- **Multifunctional Aerial Gazer:** Face tracking drone (DJI Tello EDU) using OpenCV, TensorFlow and MediaPipe for face detection, head pose estimation and hand gesture recognition.
- **SAT solver:** C++ implementation of CDCL-based heuristic algorithm to solve **SAT** (NP-complete) problem.
- **Compiler:** It's implemented in lex, Bison, and C++ generates RISC-V **assembly** for a P program.

PROGRAMMING SKILLS

- **Languages:** Python, C/C++, Java, Javascript, PHP, Haskell, HTML/CSS, SQL, P4
- **Tools:** Kubernetes, Git, Spring Boot, Azure, Unity, Linux, Docker, GCP, AWS, Heroku, Selenium, IBM Qiskit

PUBLICATION

- **S.Y. Wang and N.E. Kuo. Using programmable p4 switches to reduce communication costs of parallel and distributed simulation:** In 2022 IEEE Globecom, 2022.
- **N.-E. Kuo, Y.-C. Chu, and R.-J. Chen. Quantum computation and shallow circuit experiment:** In Proceedings of the 37th Workshop on Combinatorial Mathematics and Computation Theory, 2020.