# Yi-Chia "Kevin" Chen

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### SKILLS

**Programming:** Python, Go, C++, C, C#, Java, JavaScript, TypeScript Machine Learning: Keras, TensorFlow, PyTorch, sklearn, NumPy, NLTK, cv2

Flask, Gin, Spring Boot, Hibernate, Node, Express, React, Next.js, REST API, GraphQL Fullstack:

Cloud/DevOps: Docker, Kubernetes, Postgres, MySQL, MongoDB, Redis, Git, AWS (EC2, RDS, EKS, SQS, SNS, etc.)

**Certifications: AWS Certified Solutions Architect Associate** 

**EDUCATION** 

## Georgia Institute of Technology

Aug 2021 - May 2023

Master of Science in Computer Science, GPA 3.5

Atlanta, GA

Coursework: Machine Learning, Data Analytics, Blockchain, Networks, Info Security (GDB, x86 Assembly), Algorithms

## **National Cheng Kung University**

Sep 2015 - Jun 2020

Bachelor of Science in Computer Science, GPA 3.5

Tainan, Taiwan

• Coursework: Computer Architecture (Verilog), Digital Design (FPGA), Operating Systems, Compiler, Data Structures

WORK EXPERIENCE

## Georgia Institute of Technology

Aug 2022 - Dec 2022

Graduate Research Assistant

Atlanta, GA

- Achieved parallelism in C++ by utilizing the parallel computing model HClib.
- Researched the concurrency model **Actor model** for distributed asynchronous computations.
- Conducted experiments on HClib-Actor programs and documented the behaviors of their parallel primitives.

Academia Sinica Jul 2020 - Dec 2020 Research Intern Taipei, Taiwan

- Constructed context-free parser using Brzozowski's derivative and functional programming with Haskell.
- Programmed a course website for the instructor to deliver materials to 100+ undergrads with Haskell.
- Performed formal verification using type systems with interactive proof assistant Agda.

#### **PIXNET Digital Media Corporation**

Aug 2019 - Dec 2019

Taipei, Taiwan

Data Analyst Intern

- · Created dashboards to uncover marketing insights with BigQuery, Data Studio, Python, R, and D3.js. · Automated the data import process from Google Sheets to BigQuery using Matillion ETL and Python.

Proposed new website layouts to improve user experience and ad revenue by analyzing clickthrough rate.

## **PROJECTS**

# "Mini Reddit" - Lightweight Content Rating System

May 2023 - Jun 2023

Fullstack Web Application [github] [github]

- Developed a GraphQL server using Apollo Server and Express, integrating it seamlessly with Redis and Postgres.
- Built a server-side rendered **React** web client with **Next.js** and **TypeScript**.

## "Simple Bank" - Banking Service System Using Golang

Apr 2023 - May 2023

Backend Web Application, Microservices [github]

- Developed and launched Go backend with REST APIs using Gin, and used JWT for authentication.
- Ensured the functionality of APIs and CRUD operations on **Postgres** by using **Postman** and writing unit tests in **Go**.
- Deployed the service to Kubernetes clusters on AWS EKS, and established a production database on AWS RDS.

#### "THE ONE" - Interactive Book Recommendation System

Oct 2021 - Dec 2021

Fullstack Web Application, Machine Learning [github]

- Developed a book recommender system by creating NLP models using Python, sklearn, pandas and NLTK.
- Launched the website that retrieves data from Flask backend through AJAX requests using jQuery.
- Designed an interactive visualization frontend using **D3.js** to display popular books.

# **Tagging of Thesis**

Dec 2019 - Jan 2020

Deep Learning, Natural Language Processing [github]

- Won top 25% award in the AI CUP 2019: Artificial Intelligence Analysis and Classification of Thesis.
- Trained the dataset with Neural Network models, including RoBERTa, XLNet, LSTM, and GRU, and achieved 70% F1-score on tags prediction task, using PyTorch and Simple Transformers.

# Air Quality Data Collection, Analysis, and Prediction from Scratch at NCKU

May 2019 - Sep 2019

Data Analytics, Machine Learning [github] [github]

- Won **3rd Place** in 2019 CSIE Department Research Project Competition.
- Presented PM 2.5 forecasts with deviation < 28% by training machine learning models, including regression</li> and time series analysis, with Python and sklearn.
- Collaborated in a team to containerize MongoDB and Flask server with Docker for data storage and retrieval.