

# KEVIN CHEN (YI-CHIA CHEN)

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## EDUCATION

### Georgia Institute of Technology

Master of Science in Computer Science | GPA 3.5

Aug 2021 – May 2023

Atlanta, GA

### National Cheng Kung University

Bachelor of Science in Computer Science | GPA 3.5

Sep 2015 – Jun 2020

Tainan, Taiwan

**Courses:** Machine Learning, Data Analytics (PySpark, Scala, Databricks), Linear Algebra, Data Mining, Image Processing

## EXPERIENCE

### AeroTract, LLC

Software Engineer Intern

Sep 2023 – Jan 2024

Albany, OR

- Led the software development of a web app from scratch, saving engineers 300+ hours yearly by designing UIs for fine-tuning machine learning configurations using **TypeScript** and **React**. Implemented **REST APIs** and SDKs using **Python Flask**.
- Debugged and fixed long-existing frontend issues of an internal dashboard using **React**, **Bootstrap** and **JavaScript**.

### Georgia Institute of Technology

Graduate Research Assistant

Aug 2022 – Dec 2022

Atlanta, GA

- Achieved SPMD parallel execution using **C++** parallel computing model **HClib**, **OpenSHMEM** and **MPI**, reducing runtime by over 50%. Studied the concurrency model **Actor model** for distributed asynchronous computations.
- Researched and built HClib-Actor programs using **C++**, then documented the semantics of the synchronization primitives.

### Academia Sinica

Research Intern

Jul 2020 – Dec 2020

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**.

### PIXNET Digital Media Corporation

Data Analyst Intern

Aug 2019 – Dec 2019

Taipei, Taiwan

- 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**.

## PROJECTS

### “Words” – Flashcard Maker | iOS Development, Spring Boot, JUnit, Object-Oriented Programming

Sep 2023 – Oct 2023

- Designed a native iOS app that turns word definitions into flashcards using **Swift**, **SwiftUI** and **MVVM** architecture.
- Created a **Java Spring Boot** backend following OOP principles, including developing **REST APIs** to service iOS and web client, and using **JPA** and **Hibernate** to query data from **Postgres**.
- Engineered a secure login service, authentication and authorization using **Bcrypt**, **JWT** and Spring Security Filter.

### “Simple Bank” – Banking Service System | Golang, AWS, gRPC, Microservices

Apr 2023 – May 2023

- Built a CI/CD pipeline using **GitHub Actions** to run automated unit tests written in **Golang**, create **Docker** image on **AWS ECR**, deploy the service to **Kubernetes** clusters on **AWS EKS**, and establish a production database on **AWS RDS**.
- Augmented the **Golang** backend with **gRPC** and **gRPC Gateway** using **Protocol Buffers**.

### Fake Review Detection | Machine Learning, Python

Oct 2022 – Dec 2022

- Led a team of 5: organized meetings, delegated tasks and helped teammates debug, leading to a final grade of 99%.
- Trained models using classification (KNN, SVM, Logistic Regression) and clustering (K-Means, Spectral Clustering).

### “THE ONE” – Book Recommendation System | Machine Learning, NLP, Python, D3.js

Oct 2021 – Dec 2021

- Led a team of 6 to develop a book recommender system by creating NLP models using **Python**, **sklearn**, **pandas** and **NLTK**.
- Launched a website that gets responses from **Python Flask** backend through **AJAX** requests using **jQuery** and **JavaScript**.
- Designed frontend with interactive visualization using **D3.js**, **JavaScript**, **HTML5** and **CSS3** to display popular books.

### Tagging of Thesis | Deep Learning, Natural Language Processing

Dec 2019 – Jan 2020

- 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 | Data Analysis, Machine Learning

May 2019 – Sep 2019

- Presented PM 2.5 forecasts with deviation < 28% by training machine learning models, including regression and time series analysis, with **Python** and **sklearn**. Won 3rd Place in 2019 CSIE Department Research Project Competition.

## SKILLS AND CERTIFICATIONS

**Languages:** Python, Go, C/C++, C#, Java, JavaScript, TypeScript, Swift, SQL, HTML/CSS

**Frameworks:** Keras, TensorFlow, PyTorch, Pandas, sklearn, NumPy, NLTK, OpenCV, Spring Boot, Flask, React, Next.js

**Technologies:** Docker, Kubernetes, GitHub Actions, Linux, Postgres, MySQL, MongoDB, Redis, Matillion ETL, REST API, gRPC

**Cloud:** AWS Certified Solutions Architect Associate (EC2, RDS, EKS), GCP (BigQuery, Data Studio)