

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

EXPERIENCE

AeroTract, LLC

Software Engineer Intern

Sep 2023 – Jan 2024

Albany, OR

- Led the software development of a web app from scratch, streamlining the process of tuning machine learning configurations by creating frontend UI using **TypeScript** and **React**. Resulting in an annual time savings of 300+ hours for engineers.
- Designed and built **REST APIs** and SDKs on the backend using **Python Flask**, ensuring seamless integration with React client.
- Diagnosed and resolved persistent frontend challenges 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**.
- Performed formal verification using type systems with interactive proof assistant **Agda**.

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

“Word Cards” – Flashcard Maker 📄📄📄 | Spring Boot, REST APIs, React, Redux, Swift

- 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.
- Developed an online flashcard maker using **React Redux** in **Next.js** and **TypeScript**.
- Designed a native iOS app that turns word definitions into flashcards using **Swift**, **SwiftUI** and MVVM architecture.

“Mini Reddit” – Content Rating System 📄📄 | Node.js, GraphQL, Redis, Postgres, React, Next.js, Server-Side Rendering

- Developed an **Apollo GraphQL** server with **Node.js Express** middleware using **TypeScript**, with **Redis** for session caching and **Postgres** for relational data. Implemented the GraphQL schema and resolvers using **TypeGraphQL** and **TypeORM**.
- Built a server-side rendered **React** web client in **Next.js** and **TypeScript**, and used cookies to keep a user logged in.

“Simple Bank” – Banking Service System 📄 | Golang, gRPC, AWS, Kubernetes, Docker, Microservices

- 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**.
- Launched **Golang Gin** backend with **REST APIs** and backed by **Postgres**, and used PASETO for authentication.
- Migrated the REST APIs to **gRPC** and gRPC Gateway using **Protocol Buffers**.

“Taste” – Restaurant Finder 📄 | React Native, Mobile Application, Agile, Scrum

- Collaborated with 2 developers in an **Agile Scrum** team to build the mobile app using **React Native** along with a Flask server and Postgres. Incorporated **Google Maps API** to display nearby recommended restaurants on a map.

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

- 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 Django** backend through AJAX requests using **jQuery** and **JavaScript**.
- Designed frontend with interactive visualization using **D3.js**, **JavaScript**, **HTML5** and **CSS3** to display popular books.

SKILLS AND CERTIFICATIONS

Languages: Python, Go, Java, JavaScript, TypeScript, C/C++, Swift, SQL

Full-stack: Django, Flask, Gin, Spring Boot, Node.js, Express, React, Redux, Next.js, REST API, GraphQL, gRPC

Cloud/DB: 📄 AWS (EC2, RDS, EKS), BigQuery, Postgres, MySQL, MongoDB, Redis

Technologies: Docker, Kubernetes, JUnit, GitHub Actions, Jenkins